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THE MUSEUM
of
FAR EASTERN ANTIQUITIES
(Östasiatiska Samlingarna)
STOCKHOLM



Bulletin N:o 25

Stockholm 1953

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TABLE OF CONTENTS

	Page:
Agnes Geijer: Chinese Silks Exported to Russia in the 17th Century	1
Gustaf Lindberg: Hsing-Yao and Ting-Yao	19

BULLETIN OF THE MUSEUM OF FAR EASTERN ANTIQUITIES

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CHINESE SILKS EXPORTED TO RUSSIA IN THE 17th CENTURY

BY

AGNES GEIJER

It is a rare occurrence to find an assembled group of silk weavings whose common origin and age is firmly established by documentary evidence. In a comprehensive work on the Oriental textiles from various epochs that have been preserved in Sweden, the present authoress has recently published some specimens of Chinese silks with a fixed date prior to 1700.¹⁾ This material being of considerable interest from various aspects, it was considered worthy of a more detailed investigation. The category of objects here concerned consists of flags, more precisely the Russian flags taken as trophies by the Swedish army in 1700—1707, and now forming part of the State Collections of Trophies.

By way of introduction, some historical data will perhaps be necessary.²⁾ Peter I, after becoming absolute ruler on the throne, had accelerated his efforts to extend the sphere of Russian influence westwards. The army had been reorganized and provided with new equipment. In the autumn of 1700 the Czar, despite his recent assurances of peace, crossed the Swedish frontier and besieged Narva, the easternmost border fortress in the Baltic territories which were at that time incorporated in the Swedish Empire.

Charles XII's dramatic victory at Narva on the 20th of November, 1700, when at the head of an army of 8,000 men he attacked the strongly entrenched, vastly superior Russian army, formed the prelude to a series of rapid and successful encounters, which struck Europe with amazement. The climax, politically, in this triumphal procession, is marked by the name of Altranstädt, the town in Saxony where Charles XII encamped during the winter of 1706—07. Two years later came the disastrous defeat at Poltava and the capitulation at Perevolotna, which doomed the remainder of the Swedish troops to Russian captivity in Siberia.

From antiquity and up to the world wars of modern days, trophies, that is to say flags, symbols and weapons captured in battle, have played an enormous national-political rôle. They were the concrete tokens of a victory. In contrast to the material value of the spoils of war, the trophies had a purely idealistic significance, thus also playing a considerable propagandistic rôle. That is why after each encounter they were carefully collected and — as a rule — listed. The inventory of the Narva trophies brought to Stockholm contains such detailed

descriptions that many flags can be unerringly identified.³⁾ Unfortunately, the lists of the trophies taken in the battles in Courland in 1702—1703, which were mainly fought against Russian troops, have not been preserved. According to early inventories, the total number of flag trophies from the Great Northern War comprises 427 large and 605 small flags, 22 dragoon flags and 63 standards, as well as huge quantities of pennons for lances.⁴⁾

It may be mentioned in this connection that the Swedish collection of old flag trophies is the largest at present in existence: it contains nearly 4,000 items, chiefly derived from the 17th and early 18th centuries.⁵⁾ Characteristic of the contemporary attitude to this matter is the unique album of reproductions which was started as early as 1677 by order of Charles XI. This series of exact reproductions in water colour was completed at the beginning of this century and provides a wealth of information concerning the art of flag decoration in former times.⁶⁾

The subject of our present study is, however, the Russian flags, and primarily those made of Chinese silks. As far as one can judge from a still uncompleted examination of the material, most of the Russian flags were made of Chinese silk, i. e. damask or, occasionally, diaper.^{6b)} At all events, this is the case with the large and more magnificent flags and the bulk of the painted pennons. Some simple flags are of plain silk. Also some very richly decorated flags are made of thin, plain silk taffeta, but they are exceptions. Whether these plain fabrics are of Chinese origin is a question difficult to decide, but this is possible.⁷⁾

The different types of Russian flags, which to some extent must derive from very old traditions, are in themselves of considerable interest. Several enormous flags with an abundance of complicated representations of religious character might be described as portable retables. Some of these compositions are entirely painted, mainly in gold, like the one illustrated here depicting the Emperor Constantine and the Empress Helena adoring the Holy Cross and God the Father. (Pl. 2). Other banners consist of pieces of silk of various colours let in, i. e. joined together with seams, which might be described as «intarsia». When completed with brushwork this technique gives the effect of a stained glass window when the light shines through it. The iconography is often very interesting. The subject depicted on one of the flags is strongly reminiscent of the design on a 16th century ikon in the Cathedral of St. Sophia at Novgorod.⁸⁾ Several of these flags bear inscriptions in old Slavonic, showing that they belonged to the famous Strelitz regiments (cf. description to Pl. 2).⁹⁾

Old-fashioned in type are the long pennons, often called *kupje*, which vary greatly in size — their length being from 160 to 220 cm and up to 410 cm — and which carry painted religious or symbolical representations (Pl. 24). The trophy collection further includes a series of remarkable objects designated by the Russian word *tzekola*, whose function has recently been discovered.¹⁰⁾ The meaning of the word is «hood» or «envelope», and in that capacity they belonged to the Strelitz

flags.¹⁰⁾ They have the shape of a cylinder drawn together at the upper edge and are lavishly painted, often with pictorial scenes and inscriptions. One specimen dated 1694, is stated to have belonged to a regiment from Kiev. Most of the pennons and nearly all the *tzekola* are made of Chinese silk damask.

A considerable number of the flags and standards in our collection are of a quite different type, being so to speak military-heraldic and representative of the Occidental fashion then in vogue. They were probably often carried by mercenaries, not only by Russian troops. Most of them are dominated by immense, crossed palm-leaves, enclosing a centre motif. This is often the crowned double-headed Russian eagle in various adaptations. There is, for example, a white flag where the eagle bears on its breast a medallion showing Czar Peter on horseback. The most frequent centre motif represents the celestial sword — a hand emerging from a cloud and grasping a sword — this symbol being surrounded by a golden chain from which hangs the pendant of the St. Andrew Order (Pl. 1, 3). The composition is always executed in intarsia, and the artistic possibilities of this technique are always skilfully utilized. The colour effect when the flag is held up against the light has already been mentioned. When the light falls directly on the cloth the damask design emerges in different ways according to the angle of incidence. The fact that the pieces of silk let into the flag cloth are always placed in different directions results in their various patterns never being visible simultaneously — an apparent negligence or rather irregularity which gives an extraordinarily vivid effect, only possible with the glossy Chinese damask. The photographs give some idea of this, but cannot do full justice to the beauty of the material now damaged and faded, which, when quite new, must have produced a magnificent effect.¹¹⁾

There can be no doubt that this new type, such a happy synthesis of Russian symbolism, Occidental style and Oriental material, issued from one of the Imperial workshops started by Peter I. The standardization and the bold, sometimes rather careless skill in execution point to a very comprehensive manufacture. A *terminus ante quem*, from the 30th of November, 1698, when the Order of St. Andrew was instituted, gives an obvious dating, as already assumed, to the last few years of the 17th century. The army equipment was new at Narva, when at least 115 flags and 10 standards of this kind fell into Swedish hands.

In addition to the silk fabrics of which the flags were made some further specimens may be mentioned which also exemplify the Chinese export to — and through — Russia. Two items form part of an ecclesiastical vestment taken as booty at Narva (Pl. 18: 2 and 23). The unique piece on Pl. 21 is a chalice-veil bearing the date 1697 and the donor's name. As the latter is known to have had direct relations with Russia, there is every reason to discuss the fabric in this connection. Finally, attention is drawn to some other silks preserved in Swedish churches.¹²⁾

* * *

The term Chinese silk damask perhaps requires some justification, although a glance at the illustrations showing the distinctive manner of drawing should remove all doubt as to their origin. We may also add that the characteristic quality of the weave provides further evidence of the same fact. The technique is »réal damask» throughout, i. e. it is reversible, being patterned on both sides by means of the contrasting surfaces of warp and weft satin (Pl. 19: 4). The warp is of soft silk (i. e. completely reeled), while the weft is coarser and stiffer (i. e. not completely reeled). This results in stiffness in one direction of the fabric — noticeable when folded parallel to the warp — a feature characteristic of most Chinese damask and atlas. The fabrics are usually monochrome, the design emerging through the contrast between the matt and the glossy portions. But sometimes there are surfaces in which the weft shows up in a lighter tone no doubt due to the dye having acted less well on the unreeled silk.

The diaper silk (Pl. 19: 3) is relatively primitive in technique and its manufacture does not necessitate by any means the same complicated mechanism as the large damask designs. The weave is a plain cloth (taffeta) patterned by means of floating warps like some monochrome Han silks with large designs.¹³⁾ The pattern consists of densely placed spots; the repeat is only a scant centimeter wide, the loom width is 70 cm. This kind of material has hitherto only been observed in very dark blue and in black colours, which never appear in the true damasks.

And now a few words about the colours, which, indeed, display a rather astonishing assortment, considered from the standpoint of heraldry as well as of Chinese art. Only for the flag cloth was used white, dark-blue, yellow and brick red — the latter, as usual with that dye, generally changed to buff shades — but also vague and dull nuances of brown and grey, which at the first glance would be assumed to be the result of fading. A close examination shows, however, that this is generally not the case. And a comparison with the expressive descriptions of the Narva booty proves that the colours have changed very little.¹⁴⁾

* * *

Apart from the diaper, the designs of the flag silks fall into two large groups. As each of these has its own standard width — c. 70 and 60 cm respectively — I think we can assume that they derive from different production places. In a discussion of the chronology of the pattern types (p. 9) these groups will be termed C and D. To start with C and D may appear inconsistent; it is due to the fact that these two groups constitute by far the great majority of the whole material.

One of the groups may be characterized as Ming in style. The dominant motif is a very large lotus blossom, supported by continuous stems rising in regular curves. Some patterns are asymmetrical; Pl. 3, 8, 9. Most of them, however, are sym-



Fig. 1.



Fig. 2.

metrical, i. e. follow the «turn-over» system; Pl. 1, 4, 6, 7. Dividing the surface into ogival compartments the stems form a composition of architectural coordination, which is accentuated by smaller lotus flowers placed at their points of union. Volute scrolls with flame-shaped spurs, emerging from stems and tendrils, are typical features of this group. The stylization of the large flowers is quite advanced, sometimes the petals are arranged in accentuated wreaths (Pl. 6).

Both the symmetrical and the asymmetrical schemes of composition occur in the older Chinese silks which during the 14th century were imported into Europe, and there gave rise to a new style. The drawings figs. 1—2 illustrate brocades preserved in German churches. Specimens of silk damask of the same design found at Fostat, are exhibited in various museums. One of these, with a symmetrical pattern, in the Victoria and Albert Museum, is closely akin to our group C.¹⁵

The various patterns belonging to the group termed D (Pl. 10—17) may be defined as asymmetrical designs of scattered flowers. Loose sprays, alternately two large ones and around them several small flowers, seem to have been flung over the surface in all directions. We find a variety of different botanical species rendered in an intentional naturalistic version: peonies and chrysanthemums are most frequent. But there are also one or two kinds of prunus, orchids, pomegranate flowers and fruits, «Buddha's hand» citron, etc. Among the naturalistic flora we also recognize the stylized fungus and a great number of the emblems belonging to the Buddhistic and the Taoistic series of Felicitous symbols. Sometimes we also meet with entirely alien stylistic elements, evidently deriving from the Ming type repertory described above: the conventional lotus and the flame shaped volute scrolls, the latter quite unorganically hooked upon a naturalistically rendered spray (Pl. 14—15).

In the naturalistic group, the silk on Pl. 17 with its organically continuous branches of prunus is, as far as one can judge at present, in a category of its own. The skilful composition, which almost entirely conceals the repeat pattern, as well as the artistic and exceedingly life-like rendering of the flowers and twisted branches, are of high quality indeed.

Finally, some technical facts concerning this group: the loom-width is always about 60 cm comprising three repeats approximately 20 cms wide. The height of the repeat naturally varies according to the design. But it can also vary in the same weave, as the result of the unevenness in the beating technique of the weaver. On the whole, this group is not so consistent in quality as the C group.

In Europe silk patterns of this kind would be described as rococo and would be regarded as later than those shown here. In the main, these silks are of the same vintage as those imported by the East India Companies during the 18th century. And they were also identical with fabrics sold in the Mongolian market at the beginning of the 18th century, judging from a Torgod woman's costume brought home by a Swedish officer when freed from captivity in Siberia.¹⁶⁾

The age of the naturalistic silk designs in their country of origin is a question which will be discussed later. The stylistic degeneration in some of the C category patterns noted above indicates that this type of pattern was not new when exported to Russia.

The character of the Ming type design is generally strictly observed. Sometimes, however, a naturalistic leaf belonging to another repertoire destroys the uniformity of the style or the peony is substituted for the lotus in the floral medallions. (A fairly characteristic example of this not too satisfactory substitution is to be noted in the silk illustrated on Pl. 7.)

When this investigation was nearing its close, a flag was found whose »Isabel-coloured» (cf. foot-note 14) cloth displayed two hitherto unknown examples of advanced style confusion (Pl. 5, 9). It is the Ming type which constitutes the ground of both compositions. In the asymmetrical pattern on Pl. 9 the wavy stem follows the same course as that on Pl. 3 and 8, but the conventional flower in these patterns has been replaced by a naturalistic peony and the characteristic scrolls and tendrils have been transformed into fluttering leaves. The symmetrical pattern on Pl. 5 consists of the naturalistic floral sprays from the D group, forced into the strict compositional scheme of the Ming type, but there are also details, which derive from the C repertoire. Of the two big flowers the one is a real peony, the other a curious blending of a naturalistic chrysanthemum blossom with long spiky petals and two seed pods probably from the lotus and the centre shaped as a *ju-i* ornament. The combination of a single lotus and the magnolia-like spray — symmetrized! — testify to the different sources from which they derive. The similarities — chiefly of technical character — in lay-out, loom-width and size of the repeat, prove that these two fabrics have come from the same region of manufacture as the main Ming group. On the other hand, there is one detail which seems to indicate that this

attempt at modernization of the somewhat old-fashioned Ming style was made in a different workshop from that which produced the other silks: in this silk alone, the selva is marked in colour, whereas all other silks of this group have self-coloured selvages.

A contrast to the two pattern groups described above — both of which in course of time gained the approval of the West and were there imitated — is provided by a silk with a still more pronounced Chinese character (Pl. 21). In this a crane combined with pomegranate fruits and flowers and a phoenix combined with fungus scrolls, each forming circular compositions, are surrounded by sparsely scattered attributes of the Eight Immortals. Although not among the fabrics imported on behalf of the Imperial workshops, this silk was no doubt acquired in Russia about 1670—1690. A similar lay-out of roundels floating freely on the surface occurs sometimes in the genuine Chinese silk fabrics that reached Europe after the Revolution.¹⁷⁾ They appear in monochrome damask and in gauze weave, as well as in embroidery. In his recently published work »Dragon Robes» Mr. Schuyler Cammann has several examples of coats with embroidered medallions, whose style is very similar to that on Pl. 21.¹⁸⁾ In a portrait a Manchu noblewoman wears under her magnificent open dragon jacket a robe whose design greatly resembles ours. Fabrics of this kind were apparently seldom exported until recent time. As far as I can remember, this type is rare among the Chinese silks which came to Europe during the 17th and 18th centuries through the agency of the East India Companies. The merchants must have considered them too unsuitable for European taste.

A twill damask (Pl. 18) with waves and swimming birds, although more old-fashioned and less pretentious, is also just as genuinely Chinese. The design is closely related to an interesting Chinese silk from the Yüan period, which is used as a relic cover in the Cathedral of Åbo, in Finland.¹⁹⁾ This is a twill damask, with a sea-turtle and a phoenix among waves and clouds. Upon this fabric has been embroidered, in Sweden, a figure scene in the Early Gothic style, which in conjunction with other circumstances gives a definite *terminus ante quem* of c. 1300. It is characteristic that the fabric reproduced on Pl. 18 has been put to a modest use owing to its antiquated design: it now forms the edge of the lining of the Russian liturgical vestment shown on Pl. 23.²⁰⁾

Still another category — group E — consists of Chinese imitations or rather re-interpretations of designs alien to China; these are strange products, whose distinctive manner of drawing immediately reveals the Chinese make. The prototype of the two silks on Pl. 22—23 is undoubtedly to be sought among Italian fabrics with the familiar pomegranate design of the Italian quattrocento, e. g., fig. 3.²¹⁾ The discontinuous, degenerated traits shown on Pl. 22 come closer to the prototype than the more distinctly remodelled design on Pl. 23. It is easy to identify the pomegranate fruit in the centre of the large leaf, which has several

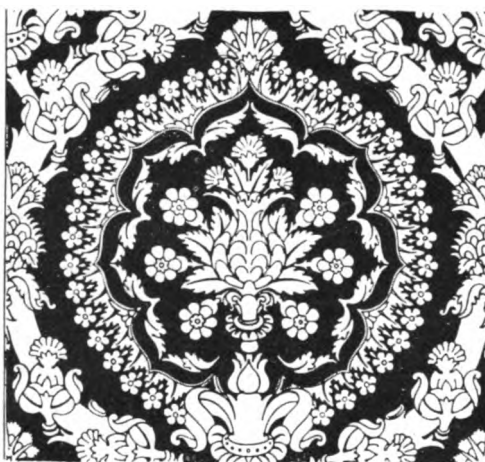


Fig. 3 (cf. Note 21).

more lobes than the Italian ones usually have. The circle of small leaves surrounding the large leaf must have been inspired by the garlands of small flowers often seen in the rich velvet brocades. The constructive logic so characteristic of Italian designs has, however, been entirely misunderstood by the Chinese pattern-maker, who has instead filled the intervening spaces with detached elements. The silk on Pl. 23 belongs to the booty from Russia — as already mentioned, captured at Narva — while that on Pl. 22 has long been used as a chasuble in a Swedish church. Similarities in technique, such as the loom-width (exactly 52 cm) and the selvages marked with two narrow stripes of colour, make it quite certain that both derive from the same manufacture.

The damask on Pl. 22:2 was used for a Russian cavalry standard entirely without decoration, which can hardly have been manufactured in the exclusive Imperial workshops. The curious design is clearly composed of ornaments chosen at random from a European Renaissance fabric. It is scarcely probable that a direct prototype ever existed, but we recognize the checkered bands and the centre flower from certain Italian damasks and velvets from the late 16th century, figs. 4—6.²²⁾ The fabric last described is slightly coarser than the other two, but resembles them in the matter of selvages and loom-width.

The conclusion is obvious: they are products of a manufacture specialized in the imitation of foreign designs, presumably for export. The Chinese craftsman's skill in imitating all sorts of material is often demonstrated. Among earlier instances we remember, referring to von Falke, the striped Mameluke brocades, copied for export to the Arab world.²³⁾ Analogous examples of manufactures produced for export to the Mongolian market have existed in China up to the



Fig. 4 (cf Note 22).



Fig. 5.



Fig. 6.

present day. It may also be mentioned in this connection that among the Chinese silks published in «Oriental Textiles in Sweden» there is a corresponding group of somewhat later date in which the Chinese forms are strongly influenced by European as well as Indian pattern types.²⁴⁾

* * *

From the description of the Chinese silk products given above we can obviously distinguish the following categories:

A. The «diaper» silk, comparatively primitive in technique, with small spots constituting the germs of a lozenge pattern. The ground patterns of geometrical spirals, swastikas and «interlocked T's» on bronze mirrors from the Huai period²⁵⁾ seem to have been inspired by silks of a similar kind though in elaborate variations. Compared with the silks shown on Pl. 19: 3 such weaves may have represented a

more advanced stage of evolution, thus proving this type of weave to date from still earlier time than the Huai period.^{25 b)}

B. The Yüan or perhaps Sung pattern twill damask, still in use for simpler purposes.

C. The large floral patterns of an old-fashioned type, in real damask, Ming style.

D. The vast group of real damasks with asymmetrical scattered designs, mostly with naturalistic motifs, mainly representative of the export of Chinese silk fabrics which were introduced into Europe in the 18th century through the agency of the East India Companies.

E. The ultra-Chinese type which, practically speaking, never reached Europe until the 20th century.

F. The imitations of foreign patterns which in the 17th century were already out of fashion in Europe. This category may be regarded as more or less unsuccessful attempts at producing export articles on the same lines as those made for different Asiatic markets.

It seems likely that each of the above groups represents separate manufactures, located in different places. Otherwise it is hardly possible to explain a certain distinctive feature of the technique, viz. the consistent difference in loom-width characterizing each particular group: in type A this is 70 cm, in C about 70 cm, in D about 60 cm, in E 65 cm and in F 52 cm. Considering the great number of items forming the two largest groups, C and D, it is obvious that the divergency between them cannot be accidental. These dissimilarities must be conditioned by some technical factor; perhaps they are due to the looms. The construction of the various looms is in its turn dependent on the local handicraft traditions with their inherent conservatism. Such may go far back into the distant past.²⁶⁾

For the material here presented we have an indubitable *terminus ante quem*. One wonders whether it is possible to discover a corresponding *terminus a quo*. This query must be answered in two different ways: firstly regarding the actual point of time when these silks were woven and, secondly, regarding the origin of the designs and their adaptation for silk weaving.

The first part of the question is mainly concerned with the Russian trade. With the exception of home manufactures, coarsely woven linens, Russia had no textile industry of any importance. The luxury fabrics required by the Russian court and nobility could be supplied by import from Persia and India; this appears to have been on quite a considerable scale during the 16th and 17th centuries, there being an important traffic of transit goods which were shipped over the Baltic ports as well as over Archangel in the Arctic Ocean. The present authoress has earlier dealt with this subject in detail and with the Swedish trade policy vis-à-vis Russia, in which connection interesting excerpts from the document known as »Mercatura Ruthenica» written by J. P. Kilburger were cited.²⁷⁾ Kilburger, as

member of an official Swedish trade expedition to Russia in 1673—74, was in a position to make important observations, which he supplemented with items from available literature. After a detailed account of the Indo-Persian import goods — chiefly raw silk, various kinds of silks and brocades, «Kindiak» and other cottons — and the conditions of the many Indian and Persian merchants who periodically resided in Moscow, he proceeds to deal with the Chinese or, as he calls it, Cathayan trade. It is clear that he speaks of this as something entirely new.

He begins by remarking that the Russians have started seriously to promote this trade and have therefore dispatched a first embassy to the Great Tatar Khan in Peking. This is stated to have been in 1654 and to have resulted in an agreement respecting the exchange of commodities in the Siberian town of Tobolsk. This trade increases annually, we are told. The Chinese (i. e. Mongolian) merchants bring to the town different variegated silks, plush in various colours, and also precious stones, chinaware, rhubarb, tea, star-anise, etc. An interesting observation is that the raw silk which had then begun to reach Siberia was considered to be of infinitely finer quality than the Persian article. He gives an example. In 1673 such silk was sold to the Czar (i. e. State monopoly) for 25 roubles per pood (1 pood = 16.38 kg), but it was so exquisite and fine that a German merchant paid 120 roubles for it and sent it to Hamburg.

The information with regard to the Russian embassy to Peking in 1654 is confirmed by Korostovetz in his learned work on the history of Mongolia «Von Cinggis Khan zur Sowjetrepublik».²⁸ This author states that the Russians had made other attempts in the early part of the 17th century to negotiate direct commercial agreements with China. Though the ambassador of the Czar was never received in audience by the Khan himself, owing to different views on the matter of ceremonial behaviour, and consequently no written guarantees were given, it seems obvious that the Russian embassy to Peking was of considerable consequence. It is referred to in an old «World History Written in English» and also by Huetius.²⁹ The importance of this trade route is also stressed by eminent travelling authors, such as Olearius, Kaempfer, Witsen and Ides, who describe Tobolsk as a very busy commercial town. On the other hand, the fact that a Swedish trade delegate, Johan de Rodes, who resided in Russia between 1649 and 1655, does not seem to have known anything about Russian-Chinese trade, shows that this cannot have been on a very large scale until after the expedition mentioned.

In answering the first part of our question — regarding the time of manufacture — one must, it seems, assume that the silk fabrics were comparatively new when they were exported from China.

In this connection, however, it would be interesting to know how comprehensive this commerce was, both the direct import to Russia and the transit

trade. We learnt from the observations of the foreign travellers that after about 1650 Chinese silk was transported through Russia as well as Persian and Indian silk. In the case of Sweden, we have evidence that the Russian trade was extremely prominent at the end of the 17th century.³⁰⁾ The still extant dated specimens of Chinese silk imported to Sweden during that time are, at all events, proof that such wares existed.

While the proportions of the transit trade is entirely a matter of vague surmise it is, however, possible to form a more definite idea of the import to Russia. With all due reserve for the very limited reliability of the figures, a calculation is here ventured concerning the amount of Chinese silk used for making the Russian flags which found their way to Sweden.

We follow the categories and figures given by Petrelli (see p. 2 above).

Pl. 3 shows one of the »small» flags, which are usually about 220 cm square. For the flag proper this size takes 6.60 m of the broader kind of fabric (C) and 8.80 m of the narrower (D), and then for the intarsia one must allow from 2—3 m. Thus the amount of fabric needed per flag is 9 and 11 m respectively, or an average of at least 10 m. As all our flags of this size are made of Chinese silk, one can venture to multiply by 600, which means that about 6,000 m of silk damask will have been used merely for the so-called small flags.

The size of the six large flags which have so far been restored varies greatly: a height of about 275 cm corresponds to a width of 280—330 cm, while one enormous flag measures 346 × 398 cm. The average amount of stuff required may be estimated at 18 m per flag. As these large flags are not always made of damask it will perhaps be prudent to multiply only by 300 instead of 427, which gives us a total of 5,400 m. For the 85 dragoon flags and standards we can reckon with 3—3.5 m for each, say 300 m. Two of the small pennons or one of the large could be made from one loom-width two metres long. The exact number of pennons is not known, but certainly exceeded one thousand; on the other hand, these were also made of taffeta. If we reckon with 1,000 m of silk damask for these, we are erring on the low side.

The grand total of the above gives an approximate figure of at least 12,700 m of Chinese silk damask merely for the manufacturing of the flags lost to the Swedes. How this total compares with the original number of similar Russian flags is difficult to determine. Then there are the completely uncalculable quantities of silks used for other purposes that must have become worn out by general use. An inventorization of Russian collections might perhaps throw some light on this. Here we can, however, point to evidence that silks of the Ming type were well known, viz. coarse Russian prints on linen imitating their designs.³¹⁾

A complete answer to the second part of our question would necessitate a more thorough knowledge of Chinese art than the present authoress possesses. There exists, as we know, a wealth of literature dealing with the early Chinese silk-

weaving — finds from Noin-Ula, Lou-lan, Edsen-gol, Palmyra, etc. and the Shosoin treasure. On the other hand, very little has been written, comparatively speaking, about the more recent textiles. I will, however, venture to make a few general remarks.

In order to explain the contrasting styles in roughly contemporary products of the Han period, one or two authors have expressed doubt about the Chinese origin of some of the Palmyra finds. I should think that the explanation may lie in the vast geographical distances of China. No doubt certain places of production were situated far from the centres of art and there the long-established traditions in the matter of technique were maintained with a consequent perpetuation of an old-fashioned style, whereas in other places, for instance near the court, a more up-to-date trend in contemporary art was necessarily followed. Specialization for different purposes or different export markets might also cause certain features in a production to remain unchanged. Further, the supply of raw material, i. e. the suitability of the country for sericulture, cannot fail to have exerted a decisive influence on the establishment of silk industries in the very homeland of silk. The literature provides no information, as far as I am aware, corresponding to the geographical location of many ceramic manufactures. Do not the old Chinese records give any information concerning the places and regions where silk was cultivated and woven?

The above reflections and queries do not, however, apply only to the older material. Is it not possible that the methodical differences — loom-width, repeat-size — existing between our various silk groups may be explained along the lines indicated above?

Despite their very considerable technical and esthetic qualities — always highly estimated by the West — none of these silk damasks can be described as first-class products from a Chinese point of view. The textiles which set the fashion at that time were the dragon robes and similar magnificent ceremonial material whose multicoloured patterns were often adapted to the cut of the particular garment. These costumes were preferably made of embroidery or *kossu*, but also of brocade imitating embroidery. Allover pattern fabrics can hardly have been as appreciated in China as in Europe, where such stuffs could be adapted to changing modes and varying uses. The noble and wealthy Chinese required the monochrome damask above all as underrobes or as linings in his richly decorated jackets, a use which can well be thought to favour or at least tolerate conservatism in design.

In the case of types B and C the old-fashioned character of the patterns has already been stressed by the names Yüan, Ming, etc. Our examination of the many specimens belonging to Group D shows that this category had already degenerated, i. e. that even this type was not new when our silks were woven. Specimens exhibiting a pure form of naturalism are not numerous. The Ming style features have reappeared in the D style repertoire. On the other hand, if

one looks for parallels or prototypes in other branches of applied art, especially pottery and lacquer, it is easy to find earlier examples of floral design. The reader might only turn to a previous issue of this publication in which Mr. F. Low-Beer has a copiously illustrated article on Chinese lacquer from the early 15th century dealing with lotus, peony, prunus, cloud-bands etc., i. e. just the same stock of motifs as our silk patterns.³³⁾ We also find phoenix birds similar to our Pl. 21 and, what is more, compositions inscribed in circles on round boxes, which are remarkably like the roundels occurring both in our silk fabric and in several embroideries.³⁴⁾ One wonders whether the creators of these exquisite lacquer articles from the 15th century also designed for silk weaving. Or did the lacquer repertoire at a somewhat later stage influence the silk designs? Or is the silk ornamentation more due to the ceramic artists?

Among the products of Chinese art silk damasks of the kind shown here occupy a modest place if judged from an artistic point of view. But of course not from a commercial standpoint. They are the result of a mass-production which had long passed the creative stage. These manufactures have survived on the strength of their traditions, older styles side by side with newer ones. To explain and to date the origin of the types constitute problems that here only could be slightly sketched. We must also remember that the material known to exist is not yet by far explored. In addition to the Swedish collection of trophies a considerable quantity of just this kind of material is still extant in Turkey³⁵⁾ as well as probably also in Russia.

Finally, the author wishes to point out that she does not pretend to be a connoisseur of Chinese art and that she is fully conscious that her treatment of the subject indicates only too well her limited experience in that field. When considering some of the theories and conjectures advanced here it should be borne in mind that the author is primarily a specialist on the textile art of Europe and the Near East. The main purpose of this study has been to draw attention to this vast material which may be of importance for the knowledge of Chinese art. It is the author's fervent hope that this study will inspire other scholars to make further investigations.

NOTES.

1) *A. Geijer, Oriental Textiles in Sweden, Copenhagen 1951.*

2) For a critical examination of the following military and historical records I am indebted to Colonel Olof Ribbing, late Chief of the War Historical Section of the Swedish Defence Staff.

3) *T. J. Petrelli & A. Lagrelius, Narvatroféer i Statens Troféksamling, Uppsala Stockholm 1907.*

4) *T. J. Petrelli, »Några ord om Livrustkammarens och Statens Troféksamlingar inbördes förhållande», Svensk Tidskrift, Stockholm 1922.*

5) About 1850 the whole collection was arranged in the Riddarholm Church in Stockholm in a way that was romantic and decorative but certainly not advantageous to the flags. When they were

removed and stored in 1906 this was a very necessary measure to save them. After restoration, a small number of them was exposed in the Riddarholm Church and in the Royal Armoury. Since 1938 the authoress has supervised the preservation treatment of the trophies and has thus had the opportunity to make various observations; these form the basis of the present study. Most of the flags treated since 1938 have been added to the collection of the Royal Army Museum.

⁹) The reproductions were made by Olof Hoffman, the painter. The work was not completed until 1904–1915 by Jonas Jonsson. The entire collection of albums is now kept in the Military Record Office.

^{a, b}) Concerning the word «diaper» cf. foot-note 13.

⁷) Before being treated the flags are difficult to examine; at all events it is impossible to get a satisfactory photograph of the fabrics (cf. Pl. 19 and Pl. 14–16, the latter showing the silk after treatment). Thus only about a hundred form the basis of this study, and of these about a third still remain to be treated. Consequently, several more types than those discussed here may be discovered at a later date.

⁸) C. A. Moberg, «Mitt hjärta flödar övers», bilder och inskrifter på en rysk fana, Fornvännen 1948, p. 333–344; G. D. Filimonov, Otjerki russkoj christianskoj ikonografii. I. Sofija Premudrost'Bozjija (Vestnik obsjtjestva drevnerusskago iskusstva, Moscou 1874) p. 15.

⁹) In the early documents that kind of flags are termed «province flag.» Such were highly esteemed even by the conqueror, which is proved by a special pamphlet, printed in 1700, describing one single piece of this kind. It may be observed that the Strelitz flag shown here Pl. 2, bears such a late date, although the old Strelitz organization is generally considered to have been destroyed after the last rebellion in 1698.

¹⁰) According to information kindly supplied by the Royal Army Museum.

¹¹) After being cleaned with water in a sort of basin arranged on a large table, the whole flag cloth was allowed to dry in the same position. In order to get the damask design to stand out as far as possible in the monochrome fabric, the latter was exposed to oblique light, the camera generally being focussed at a slanting angle; this has sometimes altered the proportions (cf. Pl. 1, 8 etc.).

¹²) Geijer, op. cit., No. 16, p. 38 and Pl. 8, as well as Nos. 20–30, p. 40 and Pl. 10–14.

¹³) Several items in the Palmyra and the Lou-lan finds; cf. R. Pfister, Textiles de Palmyre I–III, Paris 1934–1940 (esp. I, fig. 7) and R. J. Charleston, Han Damasks, Oriental Art 1948: 1. A diamond patterned silk, found in Egypt, which is very similar to our Pl. 19: 4, is shown in the catalogue of the Römisch-Germanisches Zentralmuseum (F. Volbach, Spätantike und frühmittelalterliche Stoffe, Mainz 1932, Nr 276). — Needing a technical term for this kind of weave corresponding to *damask* (i. e. true damask) the author here ventures to use the word *diaper*, in The Concise Oxford Dictionary described as «a linen fabric with small diamond patterns» and in medieval texts frequently used for patterned silks (*diaspros*, *diaspre*, etc.). With this reference, however, I do not want to assert that, during the Middle Ages, «diaspre» (etc.) signified exactly the kind of weave here discussed.

¹⁴) When transported to Stockholm all the Narva trophies were catalogued (Petrelli & Lagrelius, op. cit. p. 14 f.). The colour notes concerning the western type of flags may here be quoted: 10 red damask flags with green leaves, 10 white flags with a double eagle, 18 green flags with light tan leaves (*pali couleur*), 21 light ash-grey flags with blue leaves, 7 brown (*hår/ärgad* = hair coloured) flags with sea-green leaves, 10 flame-coloured flags with green leaves, 3 light grey flags with yellow leaves, 3 sky-blue flags with *pali couleur* leaves, 6 light violet flags with sea-green leaves, 4 *sandre couleur* (probably *cendre*, e. g. ash-grey) with *coffee couleur* leaves, 2 of dark blue diaper with *sandre couleur* leaves, 7 brown flags with yellow leaves (identical with the one on Pl. 1), *Isabel couleur* flags with green palm leaves (cf. Pl. 12).

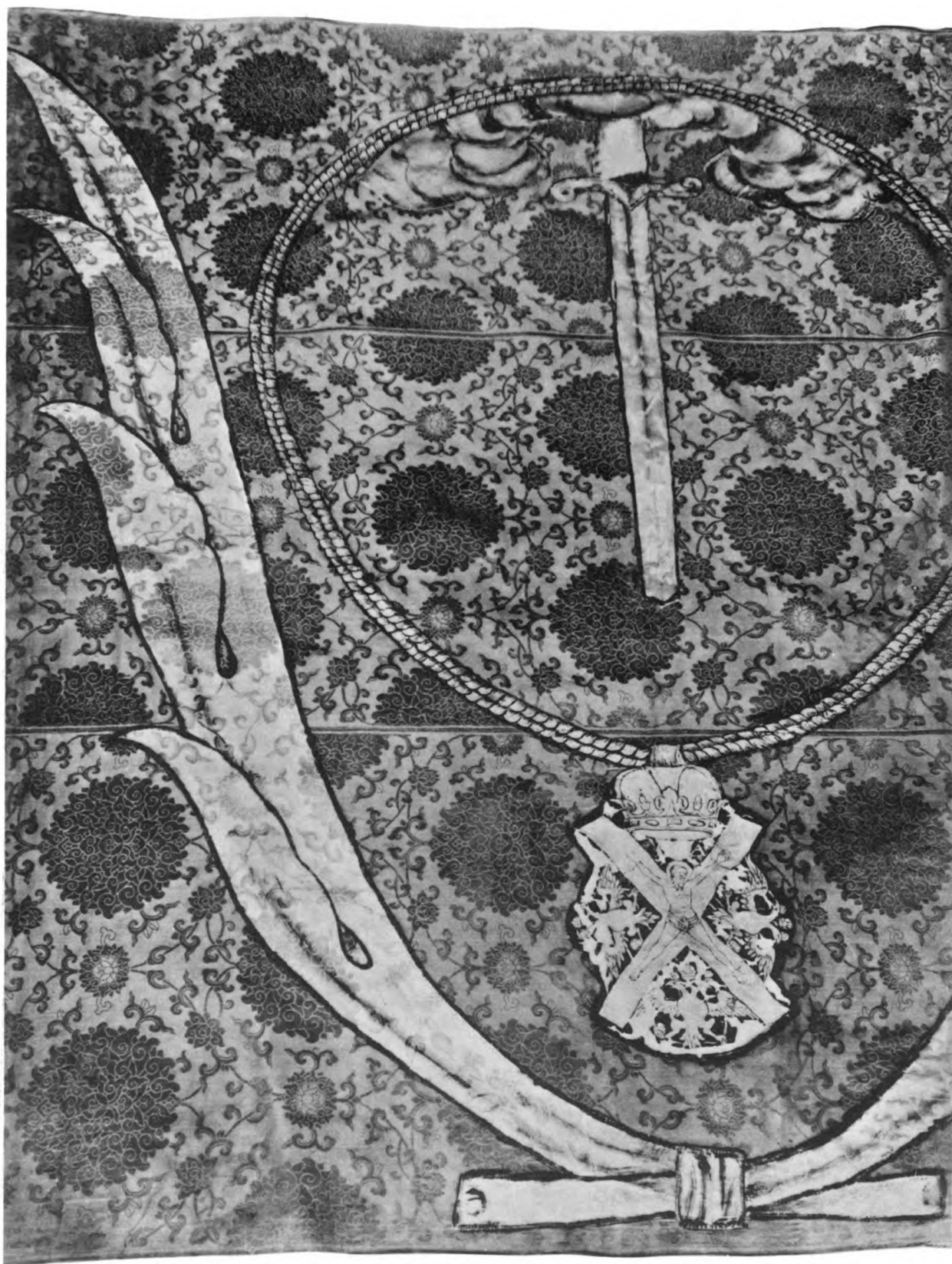
¹⁵) *Chinese Art*, Burlington Magazine Monographs, London 1925, Pl 1. to chapter «Textiles». Cf. O. von Falke, Kunstgeschichte der Seidenweberei (Berlin 1913). Abb. 322–325; M. Feddersen, Chinesisches Kunstgewerbe, Berlin 1939, Abb. 186–191; Pauline Simmons, Chinese Patterned Silks, New York 1948, fig. 31.

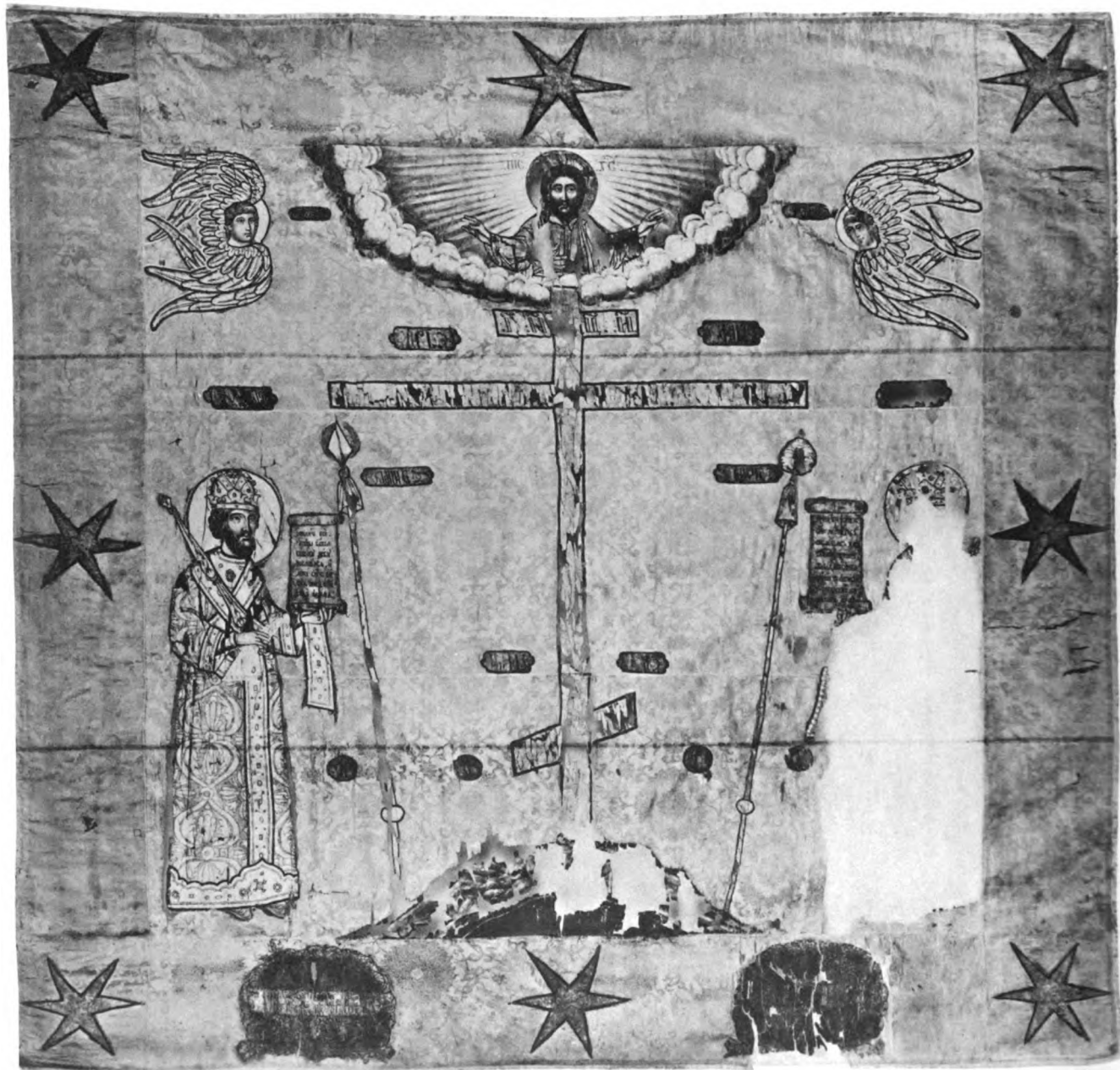
- ¹⁶⁾ *Geijer*, op. cit., p. 59, Nos. 26, 73 and 74, The costume is now in the Ethnographical Museum in Stockholm.
- ¹⁷⁾ A brocade somewhat akin to our composition Pl. 21, belonging to the Count Sakai Collection of reproductions of old Chinese silks, is shown by *Simmons*, op. cit., Fig. 26.
- ¹⁸⁾ Schuyler Cammann, *China's Dragon Robes*, New York 1952, Pl. 14 and 8—9.
- ¹⁹⁾ Erik den helige (St Erik of Sweden, team work publication) edited by *Bengt Thordeman*, Stockholm 1953, p. 304; *Geijer*, op. cit., p. 36.
- ²⁰⁾ A quite similar fabric in a royal costume from about 1640 published by *Sigrid Flamand-Christensen* in a work on the Danish royal costumes of the 17th and 18th centuries in Rosenborg Palace («Kongedragterne fra 17. og 18. Aarhundrede»), Copenhagen 1940, Pl. XLVII.
- ²¹⁾ The design is from the burial costume of Sigismondo Malatesta, dead in 1468; reproduced after *Giorgio Sangiorgio* Contributi allo studio dell'arte tessile, Milano-Rome after 1922.
- ²²⁾ The drawings show features from different items: fig. 4 damask, fig. 5 velvet, both from ecclesiastical vestments belonging to Swedish churches; fig. 6 from an Italian brocatelle shown by *Adele Weibel*, *Two Thousand Years of Textiles*, New York 1952, Pl. 263.
- ²³⁾ *v. Falke*, op. cit., Abb. 336.
- ²⁴⁾ *Geijer*, op. cit., Pl. 11—14.
- ²⁵⁾ *Bernhard Karlgren*, *Huai and Han*, BMFEA N:o 13, 1941.
- ²⁶⁾ Cf. foot-note 13.
- ²⁷⁾ Another technical detail sometimes of importance for classifying fabrics is the selvaige of the weave. In standardized manufactures, various stipulations had to be observed. An examination of this detail in the present material has, however, led to no result. The selvages vary, especially in Group D. Group C is the most uniform; here the selvages are usually of the same colour as the rest of the fabric and mainly consist of a section of plain satin followed by 2—3 mm of coarse texture (cf. Pl. 4).
- ²⁸⁾ *Johann Philipp Kilburger*, «Mercatura Ruthenica oder kurzer Unterricht von den Russischen Commerzien»; existing in two manuscripts, one in the Swedish State Archives, the other in the Wolfenbüttel archives. Printed 1762 in «Büschings Magasin». The Wolfenbüttel Ms was published and commentated by a Russian historian, *B. G. Kurts*, *Sočinenie Kilburgera o russkoj torgovlě carstvovanie Alekseja Michajloviča* (Kilburger's account concerning the Russian trade during the Reign of Alexej Mikhailowitch), Kief 1915. Partially quoted by *Geijer*, op. cit., p. 91—94 and 24 ff.
- ²⁹⁾ *Iwan Jakowlewitsch Korostovetz* unter Mitwirkung von *Erich Hauer*, *Von Cinggis Khan zur Sowjetrepublik, Eine kurze Geschichte der Mongolei unter besonderer Berücksichtigung der neuesten Zeit*. Berlin und Leipzig 1926.
- ³⁰⁾ These and other sources quoted by *Geijer*, op. cit., p. 19—20. It is, however, astonishing when studying a work such as «Europe and China, A Survey of their Relations from the earliest times to 1800» by *G. F. Hudson* (London 1931) to find no mention of the Russian trade.
- ³¹⁾ *T. J. Arne*, *Det stora Svitjod*, Stockholm 1914; *Europa upptäcker Ryssland*, Stockholm 1944; *Svenskarna och Österlandet*, Stockholm 1952. Cf. *Geijer*, op. cit. p. 23.
- ³²⁾ *N. N. Sobolev*, *Nabojka v. Rossii*, Moscow 1912, transl. by *Eugenia Tolmachoff* in the Bull. of Needle and Bobbin club 1940.
- ³³⁾ Fritz Low-Beer, *Chinese Lacquer of the Early 15th Century*, BMFEA N:o 22 (1950).
- ³⁴⁾ Cammann, op. cit.
- ³⁵⁾ According to Mr *André Leth*, Copenhagen, who some years ago, in the Seraglio collections, observed Russian flags similar to those treated here.

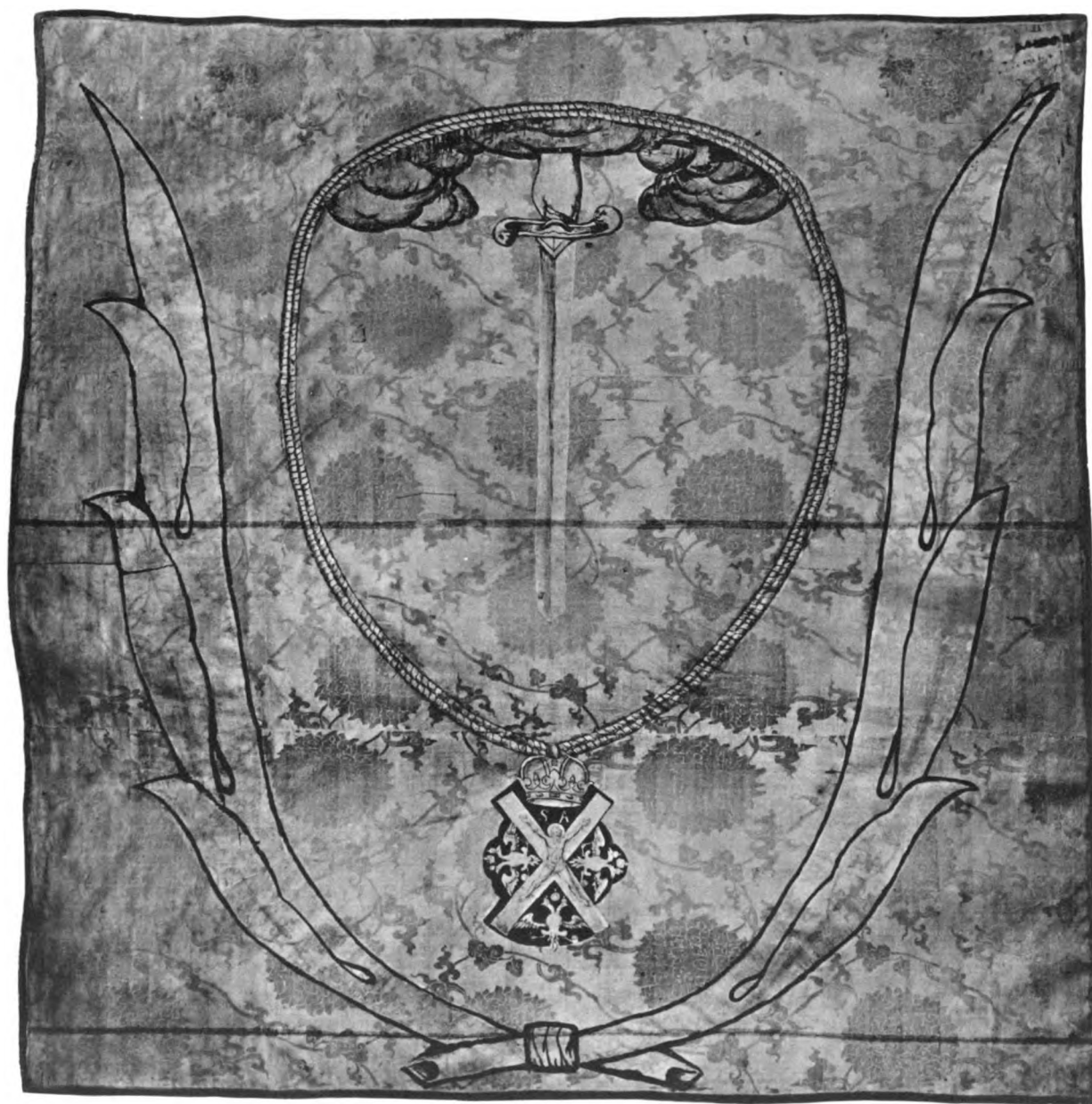
LIST OF PLATES WITH DESCRIPTIVE NOTES.

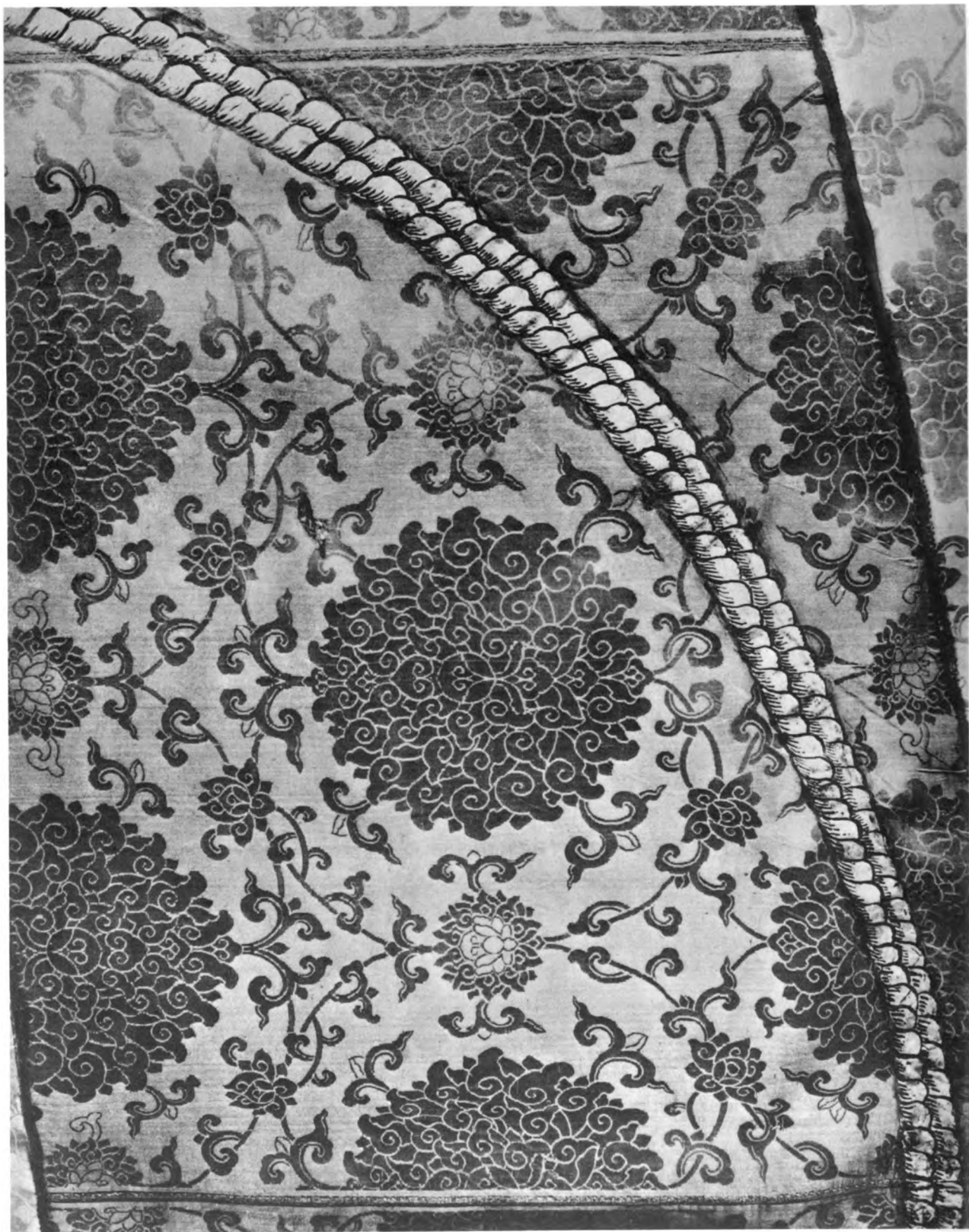
- Pl. 1. Flag J 31. Nutria-brown damask with intarsia in Indian yellow, straw coloured and sky blue damask. Size 207×209 cm. Cf. Pl. 4.
- Pl. 2. «Province flag», E 154, captured at Narva. Blue cloth with a red border (now faded) painted in gold and colours: the Emperor Constantine and the Empress Helena etc. According to one of the inscriptions the flag was made in 1699 «by order of Peter Matvejewitch Oproksin, Voivode and Governor of Nishni Novgorod, for the Novgorod Strelitz Regiment of the Lieutenant-Colonel Christopher Rinzarewitch». The damask is of C type, repeat-width 34 cm, loom-width 69 cm. Size of the flag 275×280 cm.
- Pl. 3. Flag E 254, blue cloth with intarsia in buff and white. Damask with an asymmetrical lotus design, type C. Repeat: W. 36 cm, H. 70 cm. Loom-width 71 cm. Size of the flag 214×205 cm.
- Pl. 4. Detail of Pl. 1. Symmetrical lotus design, type C. Repeat: W. 34,5 cm, H. 49–50 cm. Loom-width 69 cm. Self-coloured selvage: 1,2 cm plain satin, edged with a narrow strip of coarse weave.
- Pl. 5. Beige damask, mixture of types C and D. Repeat: W. 33,5 cm, H. 59 cm. Loom-width 68,5 cm. Bluish-green selvage, 0,6 cm. Flag J 27 with intarsia in snow-white and azure blue. Cf. Pl. 9.
- Pl. 6: 1. Yellow damask, C type. Repeat: W. 33 cm, H. 57 cm. Loom-width 69 cm. Cf. Pl. 8.
- Pl. 6: 2. Originally brick-red damask, type C. Repeat: W. 36 cm, H. 75 cm. Loom-width 72 cm. Flag E 25 comprising three widths of similarly patterned material.
- Pl. 7. Lotus design, type C. Repeat: W. 34 cm, H. 47 cm. Loom-width 67 cm. Flag E 55, of cream-white damask with green palm-leaves of asymmetrical C patterned silk let in.
- Pl. 8. Asymmetrical lotus-design, C type. Repeat: W. 37 cm, H. 51 cm. The flag J 39 is made of two different damasks, Pl. 6: 1 and 8, with green palm-leaves let in.
- Pl. 9. Beige damask, D type flowers in C type lay-out. Repeat: W. 22 cm, H. 47 cm. Loom-width 67,5 cm. Selvage bluish-green. The flag J 39 is made of two designs, cf. Pl. 5.
- Pl. 10. Floral design of D type. Repeat: W. 20 cm, H. 40 cm. Loom-width 61 cm. Ivory white flag E 132, with a light-hand painted double eagle, bearing a medallion showing Czar Peter on horseback.
- Pl. 11. Cream damask with D type pattern: flowers and mixed emblems. Repeat: W. 21 cm, H. 24,5–35,5 cm. Loom-width 63 cm. Selvage 0,5 cm, twill weave with two blue warps innermost. The flag J 25 was made of silks of four different designs. Cf. Pl. 14–16 and 19: 1.
- Pl. 12. «Isabel colour» (light khaki) damask with peonies and attributes of the Eight Immortals, D type. Repeat: W. 20 cm, H. 31–35 cm, loose weave. Loom-width 60 cm. Selvage of greyish coarse weave. Flag J 32 with palm leaves of almond green damask let in, C type.
- Pl. 13. Tan-coloured damask, D type design with scattered pomegranates and the «Eight Precious Things». Flag J 40.
- Pl. 14. D type pattern: flower sprays of peony and C type lotus and fungus scrolls. Repeat: W. 21 cm, H. 38 cm. Loom-width 64 cm. Cream-white damask. Cf. text of Pl. 11.
- Pl. 15. D type pattern: flower-sprays of peony, orchid and lotus combined with C-type scrolls. Repeat: W. 20 cm, H. 38–40 cm. Loom-width 62 cm. Cream-white damask. Cf. text of Pl. 11.
- Pl. 16. Brown damask, D type, used for the eagle, Pl. 19: 1. The feathers are lightly painted on the silk. Repeat: W. 19,8 cm, H. 28–30 cm. Loom-width 62 cm.
- Pl. 17. White damask with continuous design of prunus branches, D type. Repeat: W. 20,5 cm, H. 25 cm. Loom-width 62 cm, selfcoloured selvage. Flag J 42 carrying a large double eagle of brown silk let in.
- Pl. 18: 1. D type: cloud design in snow-white damask, used for the pendant of St. Andrew let into the flag J 32, cf. Pl. 12. The photo was retouched in order to make the silk pattern stand out. Scale ½.

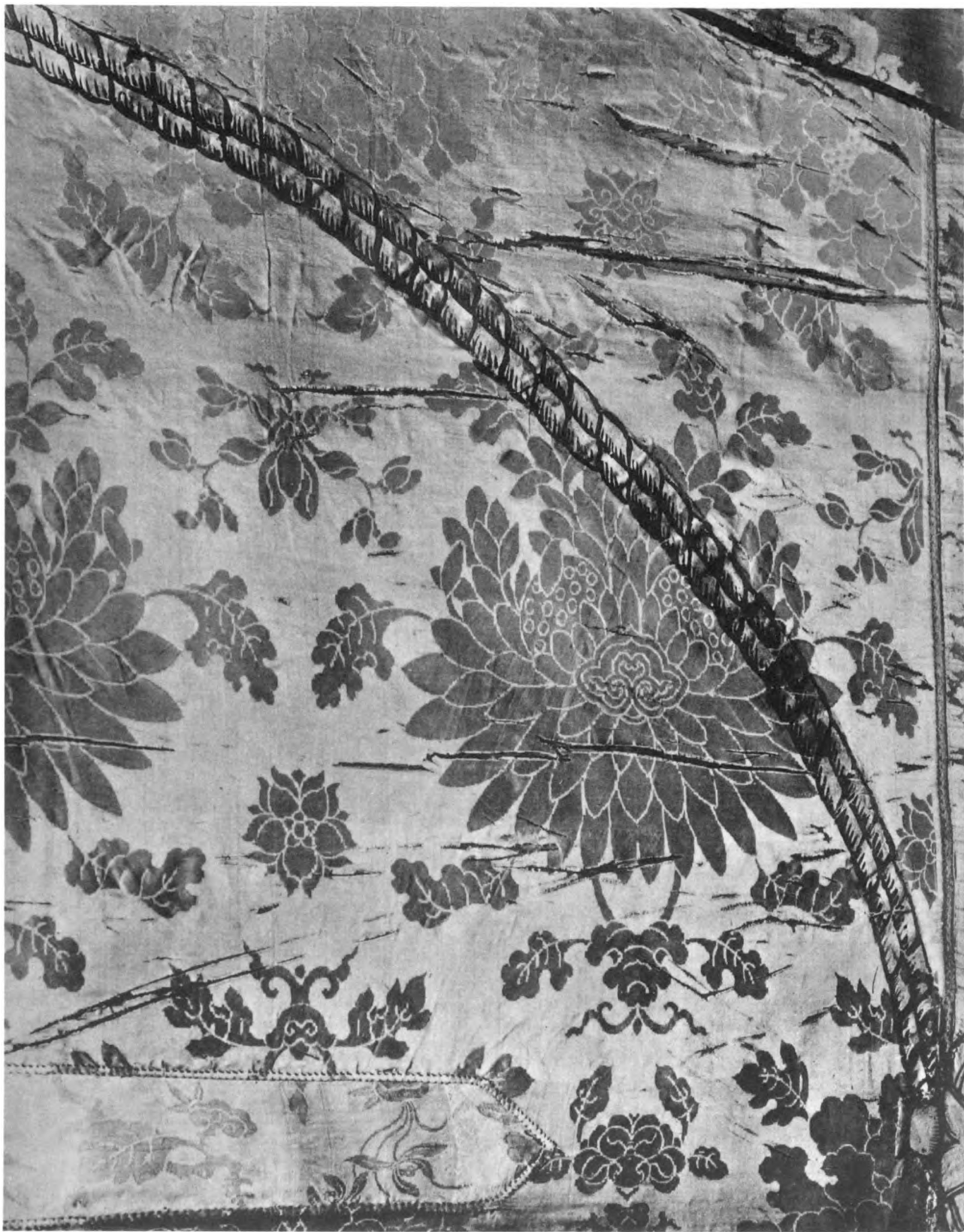
- Pl. 18: 2.* Twill damask in light buff with swimming ducks, type B. Repeat: W. 11 cm, H. 5 cm. Cf. *Pl. 23.*
- Pl. 19: 1.* The flag J 25 before treatment. Cf. *Pl. 11, 14–16.*
- Pl. 19: 2.* Black ink stamp at the end of the piece shown on *Pl. 11*, probably the control mark of the Imperial Customs. Scale $\frac{1}{4}$.
- Pl. 19: 3.* Detail from a damask silk. Scale $\frac{2}{1}$.
- Pl. 19: 4.* Dark-blue diaper silk. Scale $\frac{2}{1}$.
- Pl. 20.* Portion of a flag, E 74, showing damasks of several designs joined with seams and partially painted: the Eye of God surrounded by clouds.
- Pl. 21.* Originally brick-red damask with Phoenix and cranes in roundels surrounded by various emblems. Type E. Repeat: W. 21,5 cm, H. 35 cm. Loom-width 65 cm. Chalice-veil with embroidered date, 1697. Given to the Church of Åsbo, in the province of Östergötland, by a nephew of Samuel von Göthe, Swedish Ambassador to Russia, 1665–1699.
- Pl. 22: 1.* Chinese imitation of an Italian design, type F. Originally red silk damask, used for a chasuble in the church of Hedesunda, in Northern Sweden. Repeat: W. 26 cm, H. 70,5 cm. Loom-width 53 cm. Selvage 0,8 cm: a blue and a white stripe repeated twice, the narrow outermost border of twill weave.
- Pl. 22: 2.* Buff damask, originally red? Coarse quality with a very stiff weft. Chinese adaptation of European designs, type F. Repeat: W. 26 cm, H. 26,5 cm. Loom-width 52 cm. Selvage 0,6 cm with some blue warps. Simple cavalry banner, A 122.
- Pl. 23.* Yellow and white damask, type F. Used, with the silk shown on *Pl. 18: 2*, as lining for an Orthodox Church chasuble, which was taken as booty from the Russian headquarters after the battle of Narva. Repeat: W. 25 cm, H. 80 cm. Loom-width 53 cm. Red and white selvage resembling that of the fabric shown on *Pl. 22: 1.*
- Pl. 24: 1.* Pennon for lance of sapphire-blue damask, floral sprays of chrysanthemum, prunus and peony, D type. Repeat: W. 20,5 cm, H 30 cm. Size of the whole pennon 38×175 cm. The painting representing the legendary victory of Emperor Constantine the Great over Emperor Maxentius in 312 A. D. We see God the Father sending his angel to make the sign of the Cross in the sky, «By this Conquer», (in old Slavonic text), Maxentius lying decapitated and Constantine sitting in his tent.
- Pl. 24: 2.* Pennon of nutria-brown damask with a spray design of naturalistic peonies and Buddha's hand citron combined with a peculiarly stylized flower with fungus shaped petals and scrolls. Repeat: W. 21 cm, H. 37 cm. Whole size 39×164 cm. Baroque floral design and medallion of St. Nicholas painted in silver.

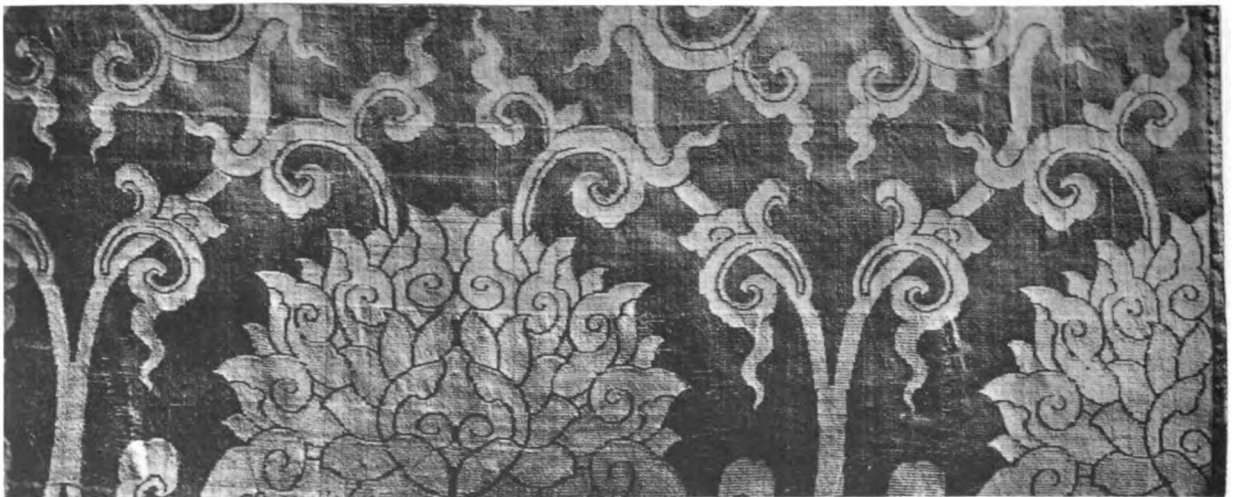
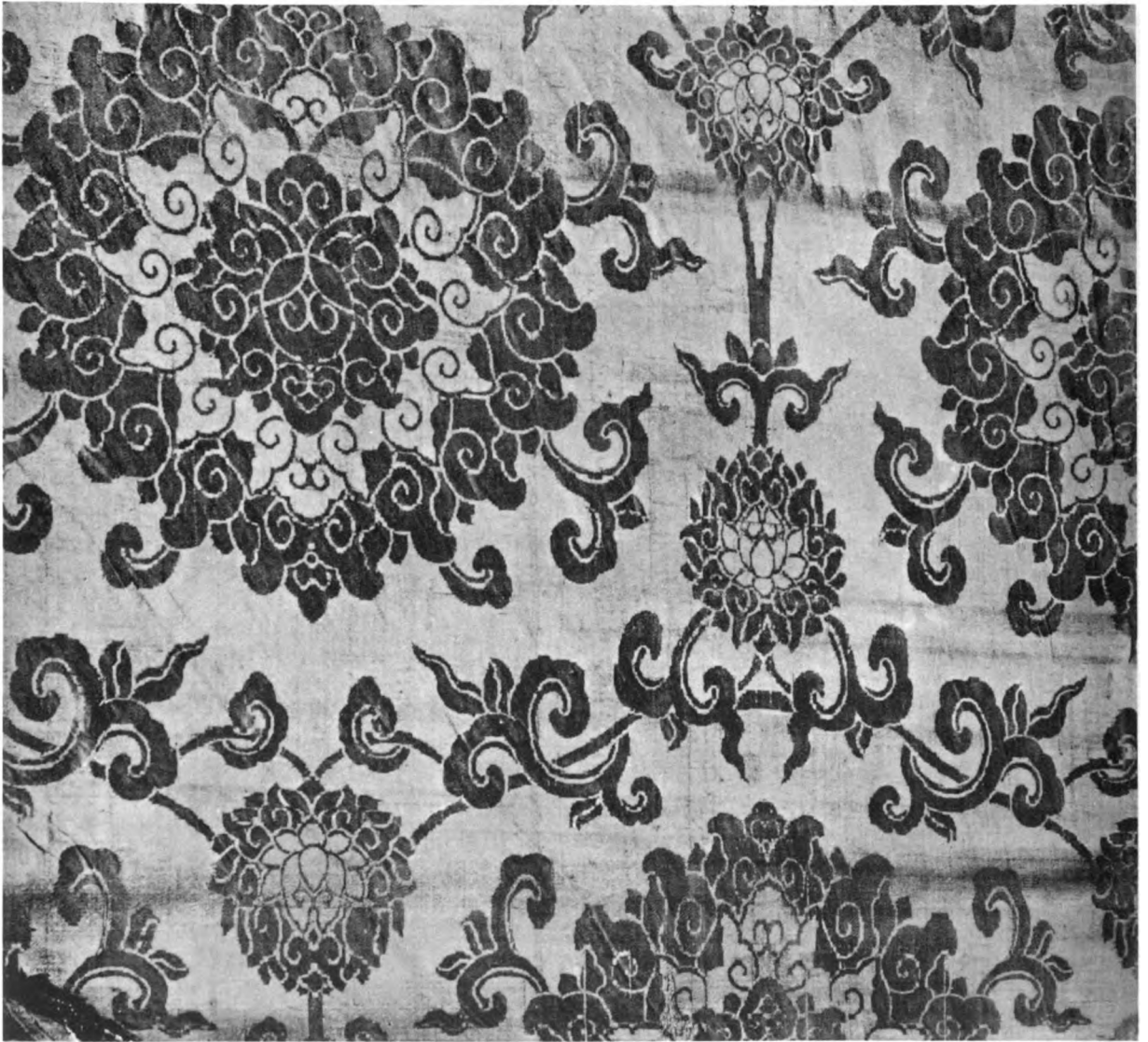




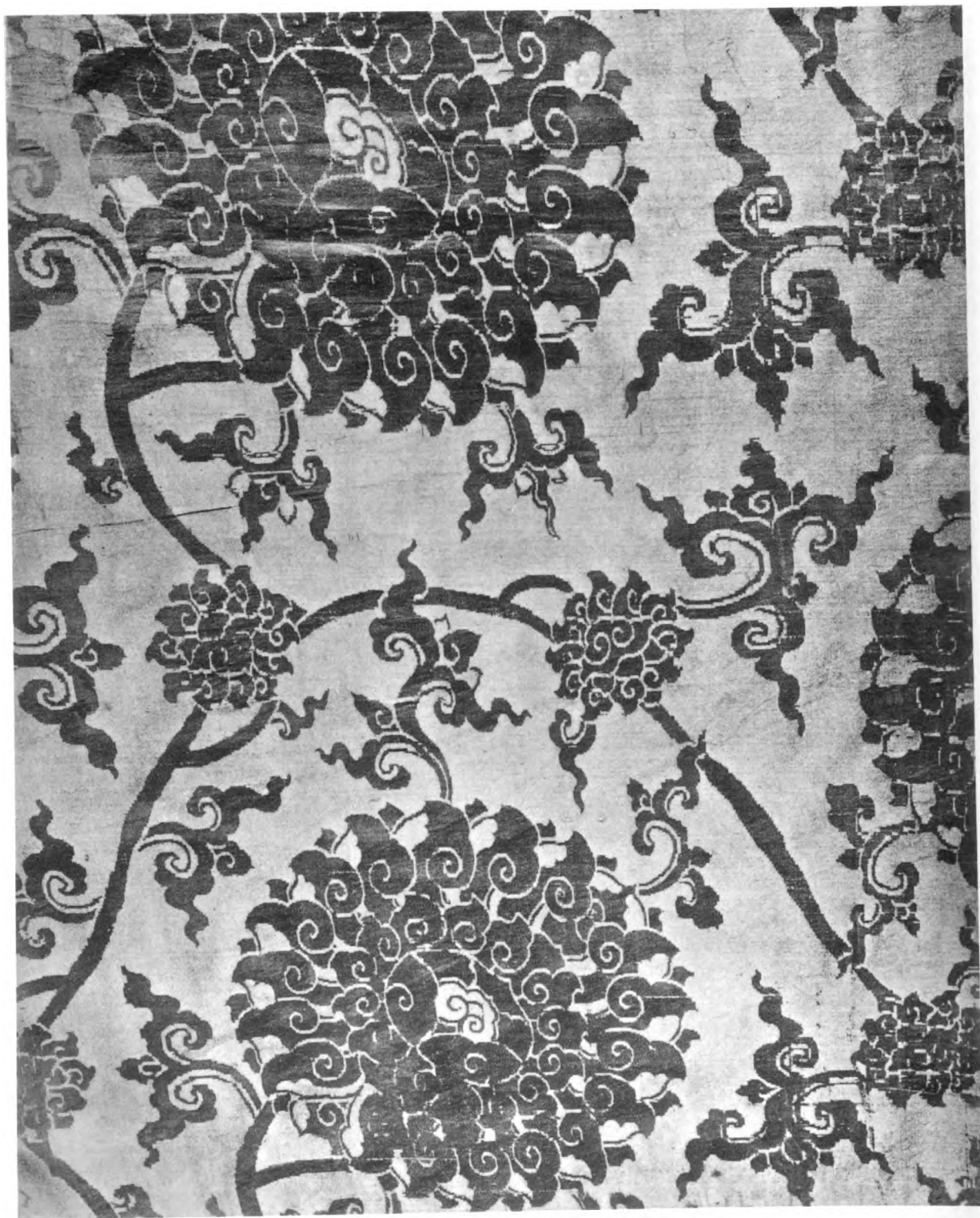


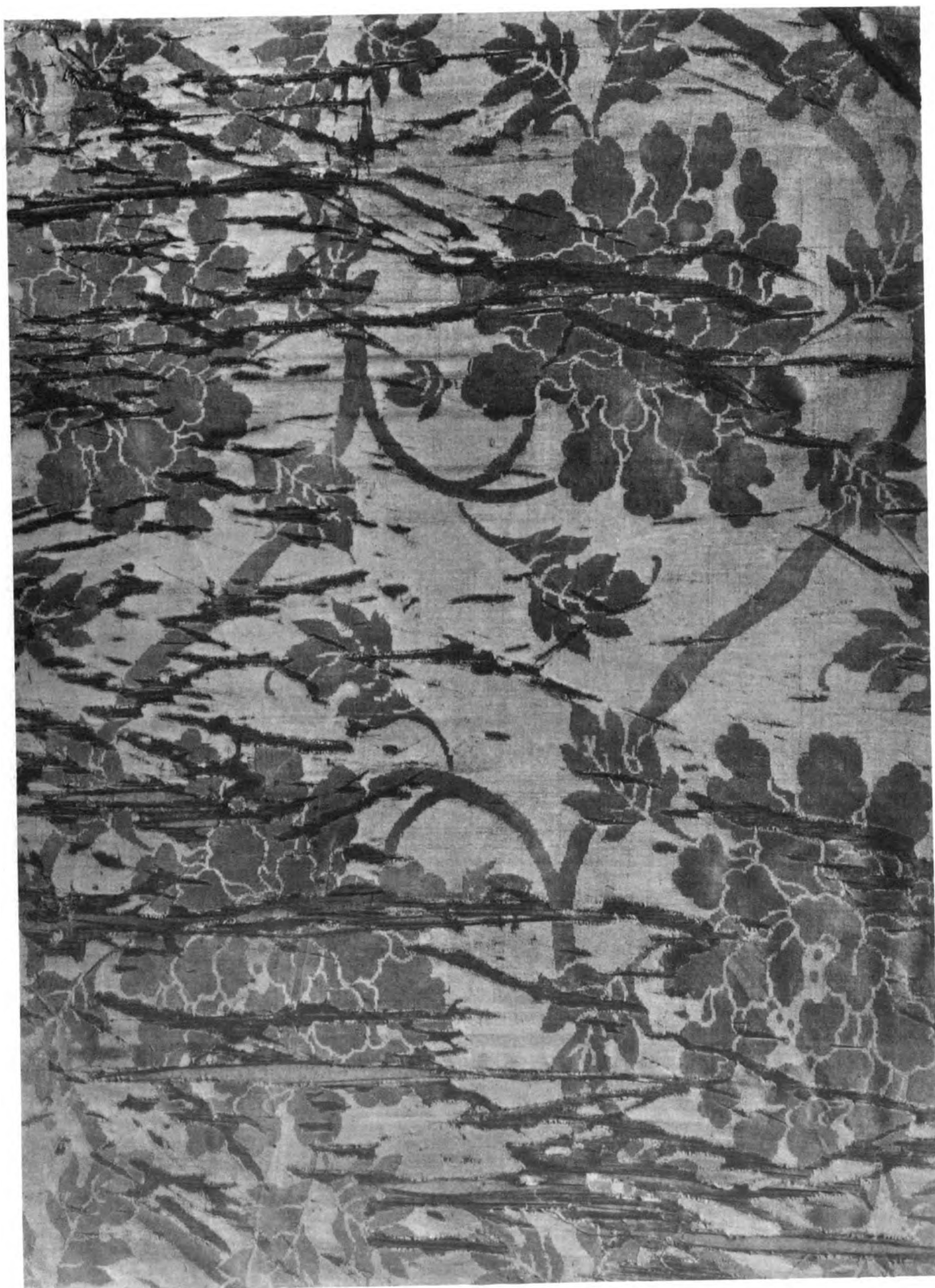


















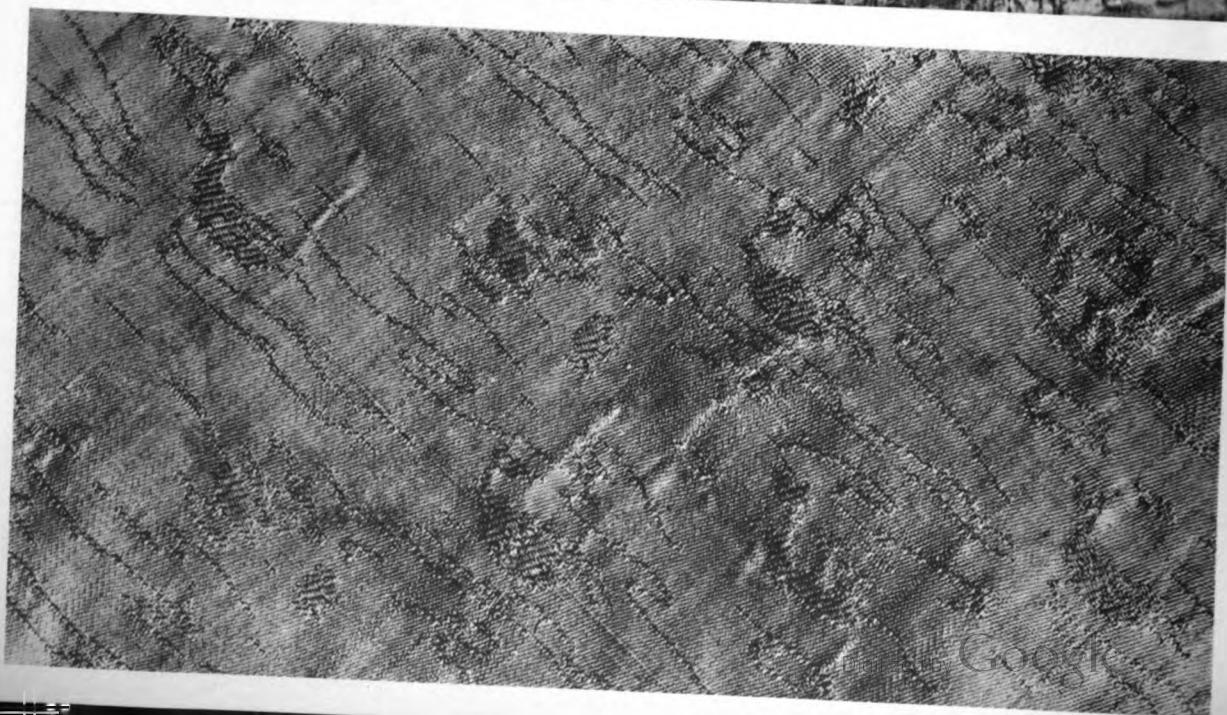


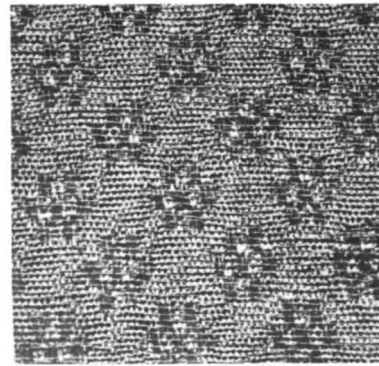
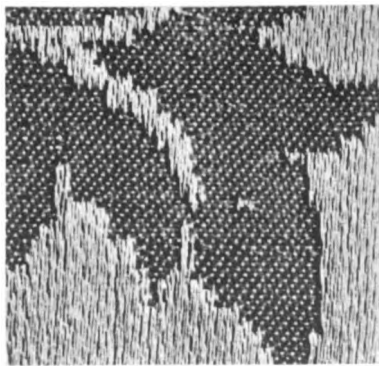




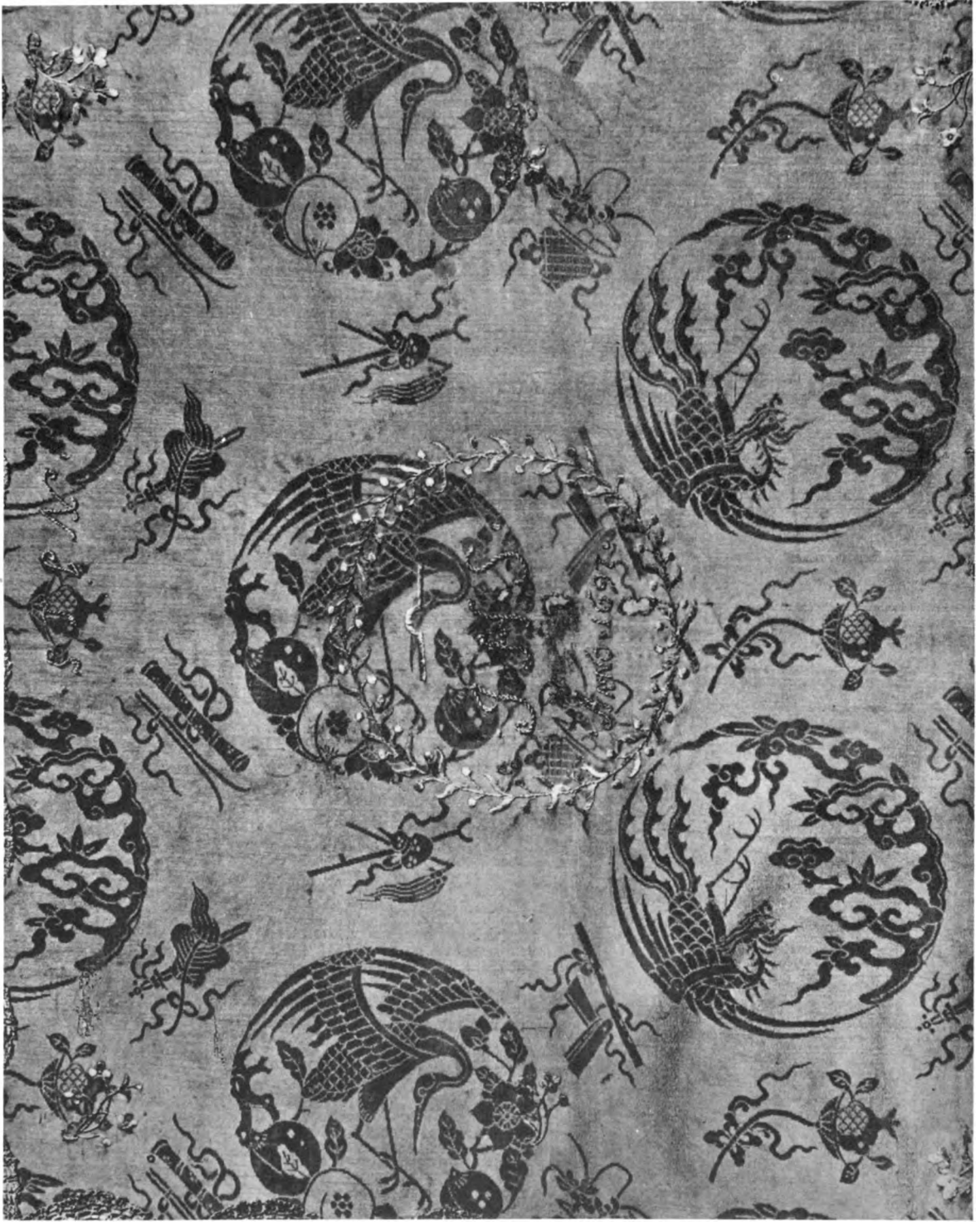


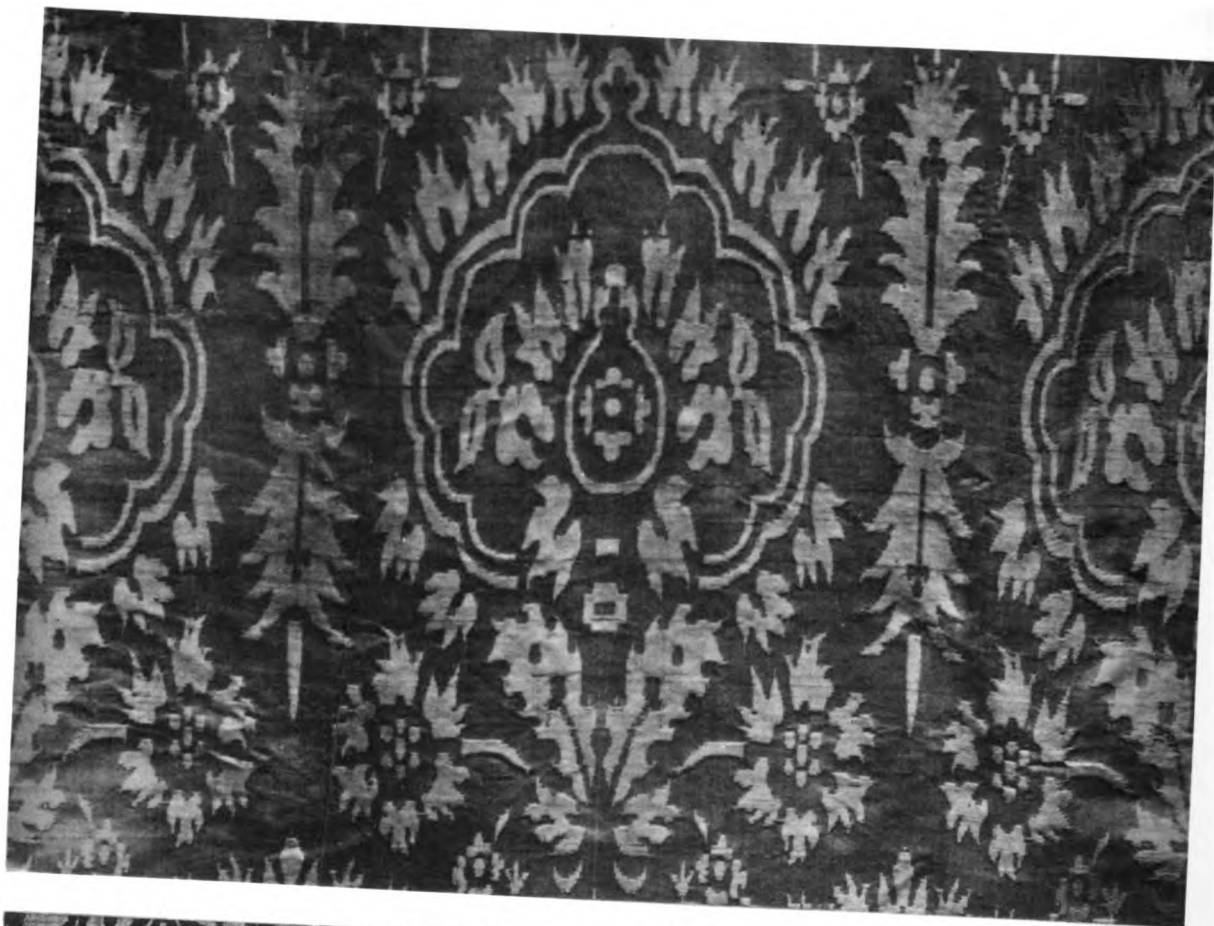
















HSING-YAO AND TING-YAO

AN INVESTIGATION AND DESCRIPTION OF SOME CHINESE T'ANG AND SUNG WHITE PORCELAIN IN THE CARL KEMPE AND GUSTAF LINDBERG COLLECTIONS

BY

GUSTAF LINDBERG

I.

GENERAL SURVEY.

Within the large field of excavated Chinese ceramics, covering various wares and shapes, and representing more than a thousand years of development, the white wares have of old been specially appreciated by the Chinese themselves as well as by the Occidentals. This applies above all to the white Ting-yao, one of the classical wares from the Sung period, which has been regarded by the Chinese as one of the peaks in ceramic art, a ware which on account of its high quality and rareness has been intensively sought for by museums and private collectors in the West. Furthermore, the Ting ware has previously been considered to be the first type of porcelain; our present knowledge tells us, however, that porcelain was already made during the T'ang period.

Our knowledge of the Ting ware has been very unsatisfactory until quite recently, owing to the fact that the site of the kiln at Ting-chou in Chihli had hitherto been unknown. When classifying different types of white wares from the Sung period, one has accordingly had to refer to the various, very often indistinct descriptions in Chinese literature, for instance, when discriminating between Ting ware of Southern and of Northern manufacture. In this respect a change for the better has occurred through the discovery by Koyama of a couple of kilns where the Ting ware was manufactured in large quantities. This most important discovery should make it possible to obtain a better classification of the Ting wares, and above all a comparison between the shards found by Koyama and a material of supposed Ting ware should make it possible to define the group constituting the most important Ting type, the Northern Ting-yao. As far as I know, such a comparison

has never been made up to now, and therefore it seems justified to give here the results of a thorough investigation, based partly on Koyama's shards, partly on the rich material of Ting ware to be found in the Carl Kempe collection.

Koyama's announcement of the discovery of the two kiln-sites near Ting-chou was published in 1941 in the *Bulletin of Eastern Art*, Nos 23—24, Tokyo, and a short report of his finds has also appeared in the *Archives of the Chinese Art Society of America* 3, 1948—1949, by J. M. Plumer. By aid of the information contained in Chinese literature he found the ruins of two kiln-sites for producing Ting-yao in the villages Chien-tz'u-ts'un and Yen-chan-ts'un. These villages are situated a good distance from the present Ting-hsien, viz. 35 miles. Koyama's description runs as follows: »The first ruin remains in the level field on the low hill to the north of the village. The ruin extends about 400 m. from east to west and about 150 m. from north to south, where here and there innumerable fragments of white ware are scattered. There is a surprisingly large number, including those of carved decorations, stamped or moulded decorations, beautiful white unfigured pieces, Black Ting, Kaki-temmoku and numerous other kinds of Ting ware. I have never seen such grand heaps of ceramic fragments either in Japan proper, Korea or Manchoukuo. Above all the heap on the west edge of the first ruin is the largest, measuring about 8 m. high and 30 m. in diameter, the whole heap being piled up entirely with these fragments. It tells nothing but the abundance of the output of the kiln in olden days.» The quality of the fragments of the second ruin were inferior to those of the first: most of them were undecorated pieces of white ware of less skilled workmanship.

The fragments which are of interest in this respect are those labelled A fragments, representing a white Ting porcelain. »White Ting is the porcelain which we have believed to be »Ting-Yao«, and it is a ware of transparent ivory glaze on a pure white body.» Whereas Koyama was able to collect no less than 1067 shards of this ware, only a small number of coloured shards of different types were found.

Out of those 1067 A fragments, 802 had a carved decoration, 11 were moulded and 254 lacked decoration. As regards the shape and decoration Koyama maintains that, whereas on the whole the shapes vary considerably, there is a very small variation within each form category. The most common decoration appears to be a carved design of lotus and arabesque. According to Koyama, the distinctive features of the White Ting are uniformity in shape and skill in workmanship. The specimens with lotus and arabesque designs represent about 80 % of the whole, and those of other designs are very few. This fact illustrates the uniformity of products and the ever-increasing efficiency in the work at the Ting site. Those very pleasing carved designs on White Ting were evidently cut by the most skilled potters, who carved the same designs by the million. Otherwise, however skilled a person might be, he could not achieve such refined and fluent carvings as those. In potting the mouths of the ware various techniques were used: shell edge, outside-curved edge etc., some being glazed but most of them being baked

in an inverted position bare of glaze. On the other hand, the feet are generally glazed and the execution is very dainty and exquisite.

As to the age of the kiln-sites in question, Koyama found 3 fragments of white pottery (not porcelain), which he regards as probably dating from the T'ang dynasty. About the chronology of the Ting-ware site Koyama further states: »On the top of the heap of relics of Ting-yao in Ch'ien-tz'u-ts'un, there were numerous fragments of late Northern Sung dynasty ware, and not a piece of a later age was found. Was it not because, as the tradition says, the kiln fell into disuse when the potters fled to the south from the attacking forces of the Chin tribe? My idea is that the Ting-yao site was closed in the end of the Northern Sung dynasty (1127) and afterwards kilns were revived in the vicinity of Ch'ien-tz'u-ts'un. White Tings were not baked at those kilns, but only pots and bowls of coarse pottery of mainly black or persimmon coloured glaze were manufactured.»

Koyama found saggers and stands in great quantities. From the cinders adhering to the ruined walls of the kilns he concludes that the greatest heat used was probably Seger cone No. 8 or 9, corresponding to about 1250°.

From the material collected Koyama has kindly placed at my disposal a series of shards of Ting-yao, especially of type A, representing white Ting porcelain. When dealing with the Ting porcelain reproduced and described here, in Swedish collections, I shall subsequently refer to this shard material. Quite as famous as the Ting wares of the Sung period, was the Hsing-yao manufactured, at an earlier epoch, at Hsing-chou. The location of this kiln-site is, however, still unknown. Scientifically speaking very little is known for certain; after all, this uncertainty concerns not only the Hsing-chou ware but all other Chinese burial ceramics, with the exception of Yüeh-yao and Ting-yao. No scientifically organized excavations of T'ang graves have been undertaken. Many finds from casual or commercial diggings have been preserved complete with clay tablets giving the date of the grave. Thus, dated grave finds are known from the years 683, 707, 714, 728 and 839. So far, the authenticity of these finds cannot be guaranteed as no specialist was present at the excavations, but no facts have later come to light to refute it. The finds are largely composed of burial figures, and these show a decided development in style, which also suggests that the dating is correct. In addition, a number of oval-shaped urns made of a white earthenware were found. These were fitted with lids, and their bases were flat, well shaped and with bevelled edges. The glaze was thin, yellowish or slightly greenish and terminated in waves several inches from the base. They thus show the T'ang characteristics found in innumerable ceramic pieces in different museums and collections.

For correct dating the Shosoin collections are an excellent guide. The numerous pieces of different kinds preserved in the Imperial Repository Shosoin in Nara were bequeathed to the Todaiji Buddhist temple in Nara by the widow of the Emperor Shomu in the year 756. However, the Shosoin also contains a number of gifts to the Buddha by pilgrims, and these cannot always be distinguished with

certainty from the original collection. Among the pieces in the said museum there are but few ceramic bowls, urns and dishes. These all show mottled, green and yellow glaze on a white ground, resembling the glaze found on many of the animal figures from the dated graves mentioned above. They do not, however, give a true Chinese impression, either in shape or glaze, and are possibly made by potters imported into Japan. It is interesting to observe that there are neither Yüeh-yao nor Hsing-yao pieces to be found in the Shosoin.

For dating the T'ang ceramics there remain, above all, the Samarra finds, and as these are of decisive importance for dating and studying the group of ceramics here discussed, namely white T'ang porcelain, a more detailed account of these finds is indispensable. This is particularly necessary since doubts have previously been expressed about the reliability of the Samarra finds, and since such doubts have recently been reiterated. This criticism seems to me loosely founded, having possibly originated from ignorance of the conditions under which the excavations in Samarra were made, and it is best met by a detailed description.

Bagdad was founded in 762, and, after having originally been only the seat of the Caliph and his administration, it expanded rapidly into a city of worldwide importance when the Caliphate became a world power. These conditions, however, soon made the town a less pleasant residence for the Caliph himself. In particular, the ever-growing Turkish guard with which he surrounded himself was a cause of unrest. *Harun al-Rashid's* son, while still only heir apparent, formed a bodyguard of three thousand men. As Caliph, under the name of *al-Mutassim*, he increased this to seventy thousand. There were now constant riots in Bagdad because of the inhabitants' antagonistic attitude to this bodyguard, aggravated by the fact that *al-Mutassim* was not considered entirely orthodox.

He therefore decided to move the capital to Samarra, a desolate place some hundred and thirty kilometers north of Bagdad on the east bank of the Tigris, where there were only a few poor villages and two Christian monasteries. The founding of Samarra was begun in 836 by workers brought from Irak, Mesopotamia, Syria and Persia. Building progressed rapidly since stucco and sun-dried brick were mainly used as material, while baked brick was only used for important buildings, in which greater durability was required.

Caliph *al-Mutassim* moved up to Samarra in 838. The Caliphate was now at its zenith and a world power extending from the west coast of Spain to the Indus and the Sind, thus bordering on India and China in the east. The town was originally intended merely as a camp and as the seat of the court and administration, and its further development was prevented. However, *al-Mutassim* died as early as in 842 and was succeeded by *Harun-al-Wathiq* (842—847). During his reign Samarra grew with unforeseen rapidity from a camp and centre of administration into a civilized metropolis, to which streamed inhabitants of the whole empire from China to Morocco.

The real founder of Samarra was *al-Mutassim's* second son *Djafar al Mutawakkil*

(847—861). During his reign two-thirds were built of that city, which to-day comprises a field of ruins thirty-five kilometres in length by about two kilometres in width — not including the massive ruins on the outskirts and on the west bank of the Tigris — and which is the largest in the world. He also built the big square palace, with a side measurement of one thousand two hundred and fifty metres, in the southern part of the city. His son only built the palace al-Ashiq on the west bank of the Tigris, the last large building to be erected, in the period 878—882.

During the last twenty years of Samarra's existence the Caliphate declined completely. Egypt, Syria and East Persia broke away, and the last Caliph left the town in 883, when he moved back to Bagdad. Consequently the town was evacuated. All movable possessions such as furniture and household utensils were taken away. Even the timber in the buildings and the gilded tiles on the walls were largely removed. This explains why the deserted city was not ransacked by later plunderers, and the paucity of the pieces found in the recent excavations. Samarra rapidly fell into decay. The large city area was soon covered by the desert sand, and as early as 903 the suggestion to move the administration up to Samarra again proved impracticable because of the general dilapidation. The insignificant village settlement remaining around the Mosque and the holy Shiitic graves still stands as a tiny walled town of two thousand inhabitants. It stands amongst the ruins, and the excavations took place in the northern and southern parts of the sandcovered ruined town, where there have been no buildings since the end of the ninth century.

There have been two scientific excavations systematically carried out in the Samarra area, namely in 1911 and 1912—1913. They were both led by Herzfeld, and the material has been collated partly by him and partly by Sarre. The ruins were covered with desert sand, and the buildings had mostly collapsed. The excavations included on the one hand the great mosque and on the other the great palace *Balkuwara* and the Caliph palace *Bait al Kalifah*, *Djausaq*, the palace *al Ashiq* on the other bank of the Tigris, private houses in the town, and the later ceramic workshops in Kurah, an area between the present small town and the river, many kilometres away from the actual excavation sites.

The finds consist mostly of exceptionally beautiful wall tiles in stucco, door and window framings, showing a rich ornamentation of decided hellenistic influence, as well as tiles for walls and floors. Practically no household utensils were found, though there were many damaged ceramic bowls and fragments of bowls. All this material was packed in crates, and at the outbreak of the war in 1914 was left in Samarra. Careful notes were made, however, of the place where each piece was found. When the town was occupied by the British in 1917, the collections were found intact and sent to London, where they were divided up later and sent to different museums, amongst others those of London and Berlin.

The ceramic finds sent to Berlin have been described in detail by Sarre in various publications. Most of the ceramics discovered were Mesopotamian-Persian, and

consisted of unglazed and glazed bowls made of a coarse, whitish-yellow clay. Similar fragments were found in many places, particularly in the bathrooms of private houses. More delicate pottery, thin-walled and with a bluish-green glaze with geometric design, was, however, only found in the Caliph palace *Djausaq*, particularly in the harem, and in the palace *al-Ashiq*; they were very beautiful fragments with a gold lustre glaze retrieved from deep down in the cellars of the palace and under the ruined buildings. Here also were found wall tiles with a white slip glaze and lustre decoration. Lustre painting seems to have originated in Mesopotamia, and there was a considerable export of such articles, particularly to Africa, where in Kairouan there still exist early Mesopotamian tile coverings.

Besides these Mesopotamian-Persian ceramics numerous imperfect bowls and fragments of Chinese ceramics, obviously imported goods, were also found on certain carefully bounded sites. This is not surprising, as it is well known that a lively trade existed between the Caliph's empire and China when Samarra was the capital. The T'ang Dynasty ruled over the extensive Chinese empire and its culture had reached a peak hitherto unachieved. Communications followed partly the ocean route from Basrah on the Persian gulf via India to China, partly the great military route from Bagdad through Persia and Chorasán to Samarkand and Turkestan, where the Chinese silk caravan road continued.

Chinese craftsmanship was very much appreciated in Bagdad and Samarra. It was admired and mentioned by several authors from the tenth century. That Chinese ceramics were held in high esteem is also proved by the interest shown in them by contemporary travellers and merchants. The most well-known is the Arabian merchant *Soleiman*, who made several journeys to China over India and Basrah. In 851, that is to say during Samarra's golden age, he described Chinese ceramics as follows: »The Chinese have a fine clay of which they fashion drinking vessels that are as delicate as glass and through which one can see the water, despite that they are of clay and not of glass.«

It thus looks as though he had seen bowls of T'ang ceramics, and it obviously surprised him greatly that bowls of clay could be given the same qualities as bowls of glass. Somewhat later, in 869, a certain *el Guhiz* mentions that he visited a person who had in his home a table on which stood bowls of multicoloured mottled Chinese ceramics.

The Chinese ceramics found in Samarra had a very definite location, namely in the great Caliph palace *Djausaq*, in the harem and its adjacent rooms, and in the cellars of the palace *al Ashiq*, under the fallen walls. In private houses, on the other hand, there were practically no finds of Chinese ceramics, although numerous pieces of Mesopotamian earthenware were found. It should be observed that Chinese ceramics lay side by side with native ceramics of the highest quality, which further emphasizes that imported Chinese goods were regarded as a luxury pertaining to the ruling class.

As the discovery of Chinese ceramics are of great importance in the dating of the different types excavated, it is imperative to decide by examination whether they can be attributed with certainty to the Samarra period. Doubt has been expressed, as already pointed out, whether the Far-Eastern fragments can be placed with any degree of certainty in the ninth century, considering the conditions under which the finds were made. In fact, however, the place where each fragment was found has been specifically stated. In Sarre's large work¹⁾ the author gives exact information concerning every important find. As already mentioned, the bulk of the finds appeared in the Caliph palace *Djausaq*, in the harem, and in the palace *al Ashiq*. Therefore, if we confine ourselves to pieces of known provenance, such as those from *Djausaq* and *al Ashiq*, it may safely be assumed that they were imported to Samarra during the golden age; it is particularly significant that no finds of other utensils of a later date have been made in these places. Finally, all these ceramic fragments were brought to light from deep below the surface.

The Chinese ceramics described by Sarre were partly of the typical mottled glazed kind, partly very typical Yüeh fragments, quite similar to those found at the kilns in Chiu-yen. In addition, fragments and defective bowls of a fine white porcelain were also found. These very different types were found at the same places. Since, however, only white ceramic is dealt with in this paper, I leave aside the other groups of ceramics in order to describe the white more thoroughly.

According to Sarre, all fragments having the following properties should be recognized as genuine porcelain: »Impenetrable hardness which does not mark by steel and does not absorb water, gritty mussel-shaped chip edge, white body, transparent, completely glassy glaze, free from all crackling and which does not split through heat; thus the Samarra finds give definitely datable examples of genuine porcelain from the ninth century.» The first bowl of this type is Sarre's No. 216, a round shallow bowl, 15 cm. in diameter and 3.7 cm. high, made of comparatively thick material (0.8 cm.), with a wide low ring foot and rolled mouth-rim, white material and thin glaze of the above-mentioned type, with a slightly translucent wall. This bowl was found in the cellar of the palace *al Ashiq* under the fallen walls. See Pl. 2, a, which shows this bowl, and Pl. 1, b, which shows the foot-rim.

A similar bowl, Sarre's No. 215, was found in the same place. This had the same shape and was of nearly the same size. Sarre's description reads: »Thin-walled shallow bowl on low wide ring foot, size 14.5 cm. by 4.5 cm. with a wall thickness of 0.8 cm. Slightly outward-curving rolled rim. White material, milky glaze, which on the outside overflows in droplets. Traces of sand on the foot». This bowl was opaque. See Pl. 2, c. Sarre does not mention whether these bowls had a slip, but in his illustration it is clearly seen that the droplets that have overflowed on the outside are a white slip.

¹⁾ Sarre-Hertzfeld, *Die Ausgrabungen von Samarra*, Bd I, Berlin 1923;
Sarre, *Die Ausgrabungen von Samarra*, Bd II, Berlin 1925.

A third similar bowl, No. 282, is not illustrated, but it is noted that the glaze in the crannies, where it is thicker, is bluish. All these bowls were found in the same place in the palace *al Ashiq*.

Besides the above-mentioned bowls, vessel No. 217 was found in the Caliph palace harem. Sarre's description of this reads: »Thin, oval small bowl on ring foot, 14 cm. by 9 cm., 4 cm. high and with a wall thickness of 0.3 cm. Straight, diagonally rising four-lobed wall. White, very slightly yellow material, with thin cream-coloured glaze, which in the crannies appears greenish. As far as the shape is concerned, the resemblance to Sasanian metal bowls is striking.» There is a whole series of larger and smaller silver bowls on ring foot which show the same shape and fourfold division as this little porcelain bowl (cf. Smirnoff). Bowl No. 217 is reproduced in Pl. 2, b, Pl. 1, a and Pl. 1, c as a section drawing. It is also worth mentioning that in the same place in the harem as bowl No 217 two small typical Yüeh cups were also found, reproduced in Pl. 2.

The finds of early porcelain described here can with certainty be dated in the following way: the first-described bowls about 880, when the building in which they were found was erected, and bowl No. 217 840—880. There is, of course, a further possibility: that they had already been imported to Bagdad and were moved to Samarra with other valuable possessions in 838. In any case they cannot have come to Samarra later than 883, when the transfer took place. Theoretically, these pieces could have been made much earlier in China, but such a supposition brings us into the realm of guesswork.

The porcelain specimens now under discussion can therefore with certainty be dated in the T'ang Dynasty, and should be considered T'ang porcelain.

The fragments from Samarra which found their way to the British Museum in London have been described by Hobson in Transactions of the Oriental Ceramic Society, Vol. 1922—1923. These fragments were found in a store-room adjoining the harem in the Caliph's palace, that is to say near the previously mentioned four-lobed bowl No. 217, which Sarre describes amongst the Berlin pieces. As Hobson's work is difficult of access, we include here a summary of his opinion on the London material, which I have studied on two occasions, in 1939 and 1950. Hobson illustrates two bases belonging to low porcelain bowls, and says about them: »The most interesting probably will be the bases which show the finish of the ware and the appearance of the bisquit as well as the glaze. They include, in addition to the typical flat T'ang bases, hollowed out bases with fairly wide foot-rim often rough, with adhering sand. The white porcelain in general varies from a greenish or creamy white, of which the glaze runs in gummy tear-drops as in the Ting ware, to a clean white of astonishingly modern appearance.» Hobson describes the reproduced bottoms as follows:

»Part of the bottom and side of a shallow bowl. White well vitrified porcelain with greenish white glaze which forms in drops in the lower parts. Base partly

glazed, and base-rim bevelled at the outer edge and rough with kiln-grit. Diam. of base-rim 3.7 in.» (Our Pl. 3 a).

»Bottom of a bowl. Pure white porcelain, with conchoidal fracture and highly vitrified. The glaze faintly greenish on the outside and running in gummy tear drops at the base-rim, but a clear white inside. The base is unglazed and shows faint spiral threadlines. The base-rim is low on the interior and lightly bevelled at the edge.» (Our Pl. 3 b).

Hobson finally comments on the importance of these shards: »The importance of these fragments is self-evident. They provide tangible evidence of T'ang porcelain, a thing which had hitherto been a matter of inference only, and they enable us to place among our T'ang wares a number of early porcelains which had hitherto been tentatively included in the Sung and Yüan groups. It is likely enough that porcelain with greenish and creamy white glaze of the same tone and with the same tendency to run into gummy tears was still being made throughout the Sung period. It is evidently the primitive type. Before deciding that a specimen is T'ang a careful study should be made of the finish of the base as well as of the nature of the glaze, and, further, one should be satisfied by comparison with the known types of T'ang pottery that the form is a T'ang form.»

Neither Sarre nor Hobson mention whether a slip is used under the glaze or whether it is absent. As has already been mentioned, Figure 1 of Sarre's illustrations (= our Pl. 2 c) clearly shows drops of slip. When in 1939 I had the opportunity of examining the fragments with the late A. D. Brankston, I was able to confirm that not only the coloured fragments but also the porcelain fragments in general had a thin pure white slip on the inside, which was clearly noticeable in comparison with the outside. Obenauer, who examined a portion of Sarre's material both chemically and structurally (Obenauer: *Berichte der Deutsch. Chem. Gesellschaft*, 1939), also points out that a slip was usually found to be present.

The Berlin fragments described by Sarre and the London ones described by Hobson complement one another in an interesting way. The foot-rim illustrated by Sarre (our Pl. 1 b) is a wide and low foot-rim with a rather small central recess, slightly bevelled on the outer margin. This bowl was found in the palace *al Ashiq*, built in 878—882. The foot-rims described by Hobson are considerably narrower with a large recess in the otherwise low foot, the outer edge of which is bevelled. This fragment originates from the Caliph's palace, which was built previously. For the rest, as far as material and appearance are concerned, they are identical. This shows that the foot-rim in the early porcelain can vary considerably in regard to size of the central recess in the foot. This agrees well with what I have shown in the earlier paper on the Hsing-yao group of T'ang porcelain (*Oriental Art*, Spring number 1950), which undoubtedly includes the Samarra finds. Originally the shape of the foot was flat, as can be seen in the burial bowls from both the Han and T'ang periods. Later on there appeared a larger or smaller recess in the foot. Confining ourselves to the Samarra finds, we observe that the simpler wide foot-

rim was found in the palace *al Ashiq*, whereas the narrower one was found in the Caliph's palace, which suggests that the fragments in the latter originate from pieces of higher quality, an assumption supported by the fact that the finest native fragments were also found here.

From this survey of the material at our disposal for dating and classifying T'ang ceramics it clearly appears that the only group of such ceramics which can with certainty be ascribed to a definite time, and also is otherwise characteristic, is precisely the white T'ang porcelain found in Samarra.

II.

T'ANG PORCELAIN.

In this article only objects which may be considered to be real porcelain have been included. As regards the definition of porcelain I have, as in my previous article about Hsing-yao (*Oriental Art* 1950), followed the directions given by March in his work: *Standards of pottery description*, University of Michigan Press 1934. His definition runs as follows: »Porcelain is characterized by its hardness, whiteness and translucency. Stoneware is dense and vitrified but lacks always the translucency and usually the whiteness of porcelain.» I have found no reason to change this definition. It is true that it does not give anything about the chemical composition of porcelain, but a chemical classification is practically unworkable. The above definition may sometimes seem misleading, since one and the same ware may give a different result according to the length of the firing and the height of the temperature, as A. L. Hetherington has pointed out in a personal communication and in his book *Chinese Ceramic Glazes* (London 1937 and Pasadena U. S. A. 1948). In practice, however, this is of no importance. The objects here described are remarkably uniform in regard to hardness as well as whiteness and translucency and furnish further testimony of the incredible skill developed by the Chinese in keeping a high and even temperature in their kilns. If a specimen of a certain shape has turned out to be translucent, all other pieces of the same shape have without exception been equally characteristic in this respect. The same applies to hardness and, to a large extent, also to the glaze.

The material of T'ang porcelain presented here has been chosen and tested with reference to the definition of porcelain given above. Wherever this test has given a positive result the object in question has been accepted for further investigation. Exceptions have only been made in a few cases, where the body has been of typical T'ang character but so heavy that it could not possibly be expected to be translucent. In these cases, however, it has been a strict requirement that the glaze and the underlying slip is obviously T'ang in character. The hardness has

been tested with a quartz-crystal, and only specimens which have not shown scratches in glaze nor in body have been included. This corresponds to a degree of hardness of 7 according to a scale by Mohs. The whiteness has been so gauged that the usually very faintly grayish T'ang body is accepted as being white. The various porcelain pieces have subsequently been tested and we have tried to determine how far they can be attributed to the T'ang Dynasty. Objects which on account of their properties as regards shape, glaze and body could indubitably be classed together with the Samarra finds and accordingly could for certain be ascribed to T'ang have first been registered. After that we mention pieces which in various ways deviate from those above, but nevertheless can obviously, for reasons given later, be classified as T'ang; and finally those which seem to belong to the transition period between T'ang and Sung. Further, a few objects of uncertain age have been included. Most intimately connected with the Samarra shards are the bowls No. 1, Pl. 5, No 2, Pl. 6 and No. 3, Pl. 7 and 8. These closely correspond to the bowls illustrated by Sarre (our Pls. 1 and 2), and with the foot-rims mentioned by Hobson (our Pl. 3). They all have the same rolled rim, a transparent, hard and not crackled glaze, which leaves part of the body above the base bare, a strongly fired resonant translucent body of white colour with a faint trace of grey and a pure white slip inside. In this connection it may be advisable to call attention to the fact that the objects dealt with in this catalogue are hard-fired and very resistant to the influence of the soil. No object has been included on which the glaze has been scaled off from the body or which shows iridescence or marks of other disintegration of the glaze (except dullness in a few cases, which fact is mentioned). The glaze of the three specimens now in question has in certain spots a very faint trace of greenish blue, giving an impression of a cold white. Closely connected with these bowls are the two dishes No. 4, Pl. 9 and No. 5, Pl. 10. Here the rolling of the rim has been replaced by broad bands on the outside of the mouth-rim. These two objects appear to be of a slightly higher quality, but it is easily seen from the plates that the foot and the manner of potting is the same. So are also the glaze, the body and the pure white slip. With the suspicion of a bluish tint in the glaze these objects give the impression of a very cold white colour.

With the exception of the shape, the large bowl No. 6 (Pls. 11 and 8) possesses all the characteristics of the Samarra fragments. It is heavily potted, but at the same time moulded with great sensitivity. This bowl shows a pure white and cold colour, while the surface of the glaze has become mat through the influence of the soil. It has an exceedingly thick slip ending on the outside in irregular drops and rolls. The bowl represents a typical example of the curious contrast between the perfect finish inside and the coarse treatment outside often to be found on the same object.

Through its fine quality and beautiful shape the bowl No. 7, Pl. 12, offers remarkably good testimony to the high standard among the T'ang potters already at this early stage. It further shows perfect agreement with the Samarra shards.

On this bowl as well the thick slip under the glaze and the sweeping finish of the glaze above the foot are plainly visible. Like the preceeding bowl, it is highly resonant.

A succession of more or less globular jars, Nos. 8, 9, 10, 11, 12, 13 and 14, and a small cup with a five-lobed mouth-rim all show the typical Samarra character. A small variation as regards the forming of the foot and the straight rim at the mouth and the foot is shown in No. 11, Pl. 15. The glaze, however, ends in a typical T'ang manner so far from the base that it may well be considered to be T'ang, even if a slightly later date is possible. Quite closely akin to the specimens mentioned above is a series of bowls, Nos. 16—18, Pls. 18—22, of a depressed globular shape with a wavy band around the mouth-rim. All these belong to the same type, which is rather unusual. The only catalogue displaying a similar type is one from the Museum in Buffalo 1946, made by Hochstadter. These bowls show considerable variations as regards the glaze. Two of them have a slip. This is specially visible on No. 17, which shows an extremely well made slip with glaze on the inside but a noticeable unevenness in the slip as well as in the glaze on the outside. The bowl No. 18 lacks slip and is potted of a clean white porcelain of a cold white colour. All these bowls have a typical T'ang character.

A wavy band around the mouth-rim is common on T'ang silver vessels and occurs as a kind of decoration on ceramic objects even before T'ang.¹⁾

The cup stand No. 20, Pls. 24 and 25, holds a special place. The material is the usual faintly greyish clay, which in this case has obviously been left without slip, giving it a distinctly greyish tone, which becomes still more visible through the fact that the glaze has a faintly bluish colour. Considering its typical Samarra foot and obvious T'ang character in other respects this bowl must, however, be defined as belonging to the T'ang period. It is extremely well potted and bears witness to very skilled workmanship. For this reason it seems to me that it must have been made at a large kiln, and it is well worth a close study, specially by those who are apt to consider the T'ang porcelain to be a coarse ware. For some inexplicable reason the foot-rim is coarse, while the bowl otherwise bears evidence of a very refined taste. The vase No. 21, Pl. 26, presents a typical Samarra foot-rim and also a typical T'ang shape. It is similar to one illustrated by Hobson (l. c.), Pl. 4 a, and is made of a typical material, with typical glaze and slip but it is not translucent on account of the thickness of the body.

Another ware of a special character is represented by no less than five smaller bowls, Nos. 22—26, Pls. 27—33, of slightly varying size but of uniform shape and with the same body, glaze and slip, all flower-shaped, with a carved central ring on the bottom inside. They are stoutly potted with fairly thick walls, but at the same time they have a beautiful shape and are extremely well made. On four of these the glaze comes down to the outside of the foot, whereas the fifth shows a bad control of the glaze on the outside and at the same time a somewhat more

¹⁾ B. Gyllensvärd, *Gold and Silver in the Carl Kempe Collection*, 1953, Pl. 100.

bluish tint. All these five bowls are furnished with a thick slip on the inside. Closely akin to them as regards the quality of the ware is the very beautiful three-lobed dish, No. 28, Pl. 34, with a typical Samarra base and a slip inside.

The five-lobed dish No. 29, Pl. 35, is also closely allied and introduces a series of five-lobed dishes or flat bowls (e. g. No. 30, Pls. 36 and 37), all of a typical T'ang character, as will be seen in our descriptive chapter. A certain deviation appears in the three small ewers Nos. 31—32, a, b, Pls. 38—39; they all have a typical body, slip and glaze, but at the same time they have a flat foot of a type which is quite commonly found in excavated T'ang vessels of stone or earthenware. The two small ewers with animal-shaped handles are remarkable in so far as they display a high degree of translucency, almost reminiscent of Ying-ching. Otherwise, however, they lack every characteristic of this ware. A larger ewer, No. 35, Pl. 41, previously belonging to the Alexander collection, has all the characteristics of the Samarra porcelain and is translucent notwithstanding the thickness of the body.

Two small water-pots, No. 12 and 13, Pl. 16, and a jar with cover, No. 14, Pl. 17, form a group of special interest. While all specimens hitherto described may well originate from the same factories, these pieces seem to have a certain contact with the Yüeh ware. Two of them have a typical Samarra body, a thick slip and glaze, whereas the third, No. 13, Pl. 16, is of an exceptionally good quality of porcelain and has a glaze most closely reminiscent of Ting wares at their best. The slip is lacking, and the translucency is clear and even. As regards the shape it recalls the Shang-lin-hu Yüeh ware. Cf. Hoyt Coll. Catalogue no. 163, which shows a close relationship.

The two bigger jars No. 36, Pl. 42, and No. 37, Pl. 43, which are both quite flat beneath, lack slip and show a glaze closely related to several of the above-mentioned objects (belonging to the Samarra group), may with a fair degree of certainty be classified as being T'ang. The nearly identical jar illustrated by Hobson and Hetherington in *The Art of the Chinese Potter*, Pl. XXX, 2, was as early as in 1923 defined as belonging to the T'ang period, and the opinion was expressed «that the finish of this simple jar and its beautiful lines were characteristic of the T'ang potter's work».

The small Kundika bottle, No. 38, Pl. 44, and the pair of small bowls, No. 39, Pl. 45, speak for themselves. They have a typical T'ang character, and the bottle has an evident metal form.

The bowl No. 40, Pl. 46, has a typical Samarra character with the exception that the base inside the foot-rim is carefully glazed. This bowl is of an extremely beautiful clean ware, and the simple shape and the unusually soft-looking and unctuous glaze reminds one of a high-class Chekiang celadon piece.

The small neatly formed bowl No. 41, Pl. 47, is also a typical T'ang specimen closely conforming to the Samarra finds. The same applies to the little cup-stand No. 42, Pl. 47, a very rare piece.

The large bowl No. 43, Pls. 48 and 52, has an evident T'ang form and is very similar to the big bowl in the Carl Kempe collection, No. 7, Pl. 12, but has no slip and is less resonant.

The same may be said of the flat bowl No. 44, Pl. 49, which is of the same type as No. 43, but differs as to the shape of the base-rim and is glazed underneath.

The objects described above have all been closely connected with the Samarra finds and have many features in common as regards body, glaze, the potting manner in general, and the shape of the base. With possibly one or two exceptions they may well be taken as products of the same kiln, and in a previous article¹⁾ I have endeavoured to attribute them to Hsing-yao. The Hsing-chou kiln was the biggest in existence during the T'ang period, being most famous for its production of white wares, and it does not seem reasonable that any other kiln during the T'ang period could have produced such a series of extremely white and high-class porcelain wares.

There are, however, undoubtedly other T'ang porcelains of a quite different character. Such a specimen of very fine quality and of great interest is the wine bowl No. 45, Pls. 50 and 23. This bowl, made out of clean white porcelain without slip, is intimately allied to the bowl with a pressed design of fishes, described by Sarre, Pls. 1 and 2. A similar bowl is owned by the museum of Buffalo, where it is defined as being Hsing ware from Hsing-t'ai, T'ang—Five Dynasties. A superb example of Hsing ware is this beautiful and rare wine-cup, copying a T'ang silver vessel in a four-lobed oval shape. Similar shapes may be seen in Sasanian silver vessels and in several polychrome T'ang earthen-ware vessels (Hobson and Hetherington, *Art of the Chinese Potter*, Pl. 23).

There are furthermore several objects in the collections described in this paper which consist of a pure white porcelain without slip, in this way indicating the relationship to the above-mentioned Samarra bowl in the Carl Kempe collection. Thus the bowl No. 46, Pl. 50, has a pure white porcelain without slip, and the foot represents better workmanship than the ordinary bases from Samarra. An identical larger bowl of this type is No. 47, Pl. 51 and 52. The foot-rim is very well made and shows a pure white porcelain body without slip. The glaze is here unusually thin and shows some relationship to the glaze of the T'ang wares. The same applies to the small waterpot No. 13, Pl. 16. The beautiful incense burner No. 48, Pl. 53, likewise has the same ware. This object has much in common with No. 8, Pl. 13 but it has a pure white porcelain without slip and a glaze approaching that of the Sung ware. The foot is, however, typical T'ang. All these pieces are closely related to the oval Samarra bowl No. 45, and one may accordingly draw the conclusion that during the Samarra period 840—880 the Chinese manufactured wares with slip and greyish body as well as pure white wares without slip. Whether all these specimens emanate from Hsing-yao or from other kilns it is impossible to decide. One fact,

¹⁾ G. Lindberg, *Hsing Yao*, *Oriental Art*, 1950

however, seems to be quite obvious. Most of the T'ang porcelain wares illustrated here bear witness to a considerable and in several cases highly advanced technique and workmanship, which can only be acquired through experiences collected during a long period. In this case there can hardly be a question of local products from smaller kilns, but it is more likely that they all emanate from bigger kilns, and it seems very plausible that most of them are Hsing-yao wares made at Hsing-t'ai.

Without slip but of obvious T'ang character are also the cup No. 49, Pl. 53, with a solid foot and flat beneath, and the globular jars No. 50, Pl. 54, and 51, Pl. 55, with the same flat base, which latter is a typical Samarra foot.

The small miniature amphora No. 52, Pl. 54, has a characteristic T'ang foot, strongly spreading, showing the hellenistic influence which is common in many T'ang stone-ware amphoras.

The beggar bowl, No. 53, Pl. 56, is another specimen of pure white T'ang porcelain without slip.

The three dishes or shallow bowls Nos. 54—56, Pls. 57—60 evidently derive from the same kiln-site. They all possess a typical T'ang character, but the foot in particular differs completely from that of the Samarra finds. The foot-rim on all these pieces is shaped very narrow as if after a metal prototype. They certainly have some features in common with the Yüeh wares from Shang-lin-hu. The small white water-pots previously described are obviously intimately connected with the Yüeh wares, and in this connection we should mention the three-lobed dish in the Percival David collection, marked Kuei Chi, which is the name of a certain group of the Yüeh-Chou sites. This piece is remarkably similar to No. 28, Pl. 34, in the Carl Kempe collection, which shows features (slip and the shape of the foot) more related to those of the Samarra finds of white porcelain, and it is hardly likely that these should be Yüeh wares.

An intermediary position is held by the three bowls Nos. 57—59, Pls. 61—63, thinly potted and of a form very much resembling the Ting-yao wares of the Sung dynasty. They are, however, five-lobed and very hard-fired, resulting in a very high resonance. The foot-rims are more similar to Samarra than to the Ting-yao. The glaze is thin and lacks the bluish tint characteristic of the earlier described T'ang bowls of the same shape. The mouth-rim is also completely glazed.

III

SUNG WHITE PORCELAIN.

T'ang porcelain is always white. As has been pointed out earlier (Lindberg, *Ethnos* 1947, 3), much Sung porcelain is coloured owing to a more or less coloured glaze, under which is found the white body, usually consisting of a white, hard and

transparent porcelain. This is the case with a large part of the Chekiang celadons and with all Ying-ching pieces.

The porcelain dealt with in this chapter is the colourless white Sung porcelain, which is generally called Ting-yao. This was one of the classical Sung wares, produced in Ting-chou and its neighbourhood in the Chihli province. According to Chinese sources there were already kilns here in the T'ang era, but the Ting ware first became famous after the Sung Emperors had taken the production under their patronage. It has been highly appreciated ever since as one of the most beautiful and refined of the Sung wares.

When the Sung Court fled south of the Yangtzu River in 1127, some potters from Ting-chou also moved, and they continued their craft at Chi-chou in Kiangsi. Thus there came to be one northern older, and one southern younger Ting ware. According to Chinese views, these should be indistinguishable. A tendency to classify a number of types previously called northern as southern Chi-chou wares has become definitely noticeable. (Honey, *Ceramic Art of China*). The reason for this seems to be on the one hand the information in the Chinese catalogue of the London Exhibition, 1935—1936, on the other hand Brankston's statement (*Early Ming Wares*, Peking 1938, p. 102) that in Chi-an-fu (formerly Chi-chou) at Yung-ho, south of the town, he had found »white-bodied wares with colourless glazes imitating Ting»; and, last but not least, the existence in the Percival David collection of a remarkable dish (No. 1171 in the English catalogue London Exhibition 1935—36 and Pl. 118 in the catalogue edited by Faber & Faber). This dish has a typical design of lotus and arabesque carved in the same manner as many dishes of the same ware. There is an inscription on the base in under-glaze white slip stating that it was made in the Shao-hsing period (1131—1162) at Yung-ho.¹⁾

Here the correct manner of approach is certainly to base ourselves on Koyama's discovery of the ruins of the Ting kilns at Chien-tz'u-ts'un and the material he found there. The many fragments he collected there throw an instructive light on the nature of the northern Ting ware, as regards both the body and the glaze, and the form and the shape of the foot-rim, all of which is apparent to some extent from the fragments illustrated in Pls. 64 and 65. To begin with, it can then be

¹⁾ To judge from photographs received by courtesy of the David Foundation in London, this dish really seems to be undistinguishable from the Ting-yao fragments collected by Koyama at the Ting-yao kiln sites. The method of potting, especially of the foot, seems to be exactly the same, and so does the carved design on the interior and the general shape of the dish.

When in 1127 the Chinese Court fled south, potters from Ting-chou are said to have moved the same way and settled in the Chi-chou district in Kiangsi. Here they made white wares imitating Ting (*Brankston l. c.*) The David dish is dated in the Shao-hsing period. Provided that the bowl and the inscription were made at the same time, it may well have been made by a Ting-chou potter in order to copy exactly a northern (= Ting-yao) specimen. But it does not seem likely that such copies have been common. It is more probable that the Chi-chou potters under the influence of the numerous Chekiang and Kiangsi ceramic products have modified their method of potting in several respects, as will be seen in our catalogue.

stated that the Ting-yao fragments have the cream-and-ivory white tinge which has always been considered characteristic of the Ting wares. Where the glaze, otherwise thin and even, on the outside in places forms into tear-drops, these take on a wax-like or gummy-like colour which earlier had likewise been considered characteristic. Not seldom one also recognizes a faint grey tinge. It must be erroneous when Honey (l. c.) takes it for granted that the four pieces from the Palace Collection in Peking (London Exhibition 1935—1936), which in the Chinese catalogue are classified as northern Ting ware, were representative of this ware. The colour of this ware is described by Honey: «apparently always of a pure white colour» and «cold white colour». As appears from the statements we have made above regarding the T'ang porcelain, Honey's description suits the latter very well, whereas the colour on the fragments of the A porcelain which Koyama found always seems to have a warm cream or ivory-tinted white, in other words the same colour that was earlier regarded normal for Ting-yao. The forms of the four specimens illustrated in the Chinese catalogue differ in form from the Koyama fragments.

Among the specimens in our present collections should be mentioned a few pieces which seem to represent a transition period between T'ang and Sung, but which, contrary to those described in the preceding chapter, have more obvious Sung characteristics. The bowls Nos. 60 and 61, Pls. 66 and 67, show great similarities to the former, but have a more Ting-like general appearance. In contrast to all objects described before, both are regularly six-lobed. The glaze lacks all signs of relationship with the Samarra finds. It is cream-coloured and thinner than T'ang glaze, which always covers the mouth-rim. These bowls have a glaze-free rim and No. 61 shows remains of a metal mounting of the rim, but the foot-rims are not of Ting type, such as is shown by the Koyama fragments. On the other hand, they have some features in common with the Ting-chou inscribed dish of the Percival David Foundation, which is illustrated in the Percival David Catalogue, Pls. 91 and 92. This is particularly true of No. 60. Probably, therefore, one should look upon Nos. 60 and 61 as early Ting ware made in the Ting-chou district.

With the Koyama fragments as point of departure, we find that our white Sung porcelain described below to a large extent shows such points of similarity to the fragments that it can be classified as Ting-yao from the northern Ting kilns, more specifically those at Chien-tz'u-ts'ün. No. 62, Pls. 68 and 69, is a dish of remarkable beauty, as is emphasized in the description in the catalogue. Observe the rolled mouth-rim, resembling that of the David dish inscribed Ting-chou, which should be considered an early form. The deep bowl No. 63, Pls. 70 and 71, also conforms in every respect to the Chien-tz'u-ts'ün fragments and hence must be regarded as a northern Ting-yao piece. A similar bowl, Pl. 57 in Honey's book, is there regarded as a southern Ting piece. The dish No. 64, Pls. 72 and 73, is a fine example of the extraordinary skill and artistic culture which

characterized the Ting-chou potters. It is also worth mentioning because it is in nearly every detail identical with a bowl in the David Foundation, David Catalogue Pl. 89. This suggests that in all probability they have been made by the same craftsman. No. 65 is likewise a bowl of the finest quality, with a high-class floral design, very rich and lovely. The foot-rim is typical and in full accord with those of the Koyama fragments. Bowl No. 66 is an example of a less elaborate variety of No. 65. The engraving is simpler, but at the same time artistically well balanced, and the foot-rim is typical here as well. The deep and large bowl No. 67, Pls. 77 and 78, tallies well with the other above-mentioned Ting-yao pieces, and the rolled mouth-rim indicates an early date. The diameter of the base-rim is unusually large, but the rim itself is very narrow and potted in exactly the same manner as Koyama's Chien-t'zu-ts'un specimens. The large dish No. 68, Pl. 79, conforms to Koyama's fragments as far as the base is concerned. The rich floral design on the inside is moulded. Moulded designs are not common among the fragments collected by Koyama, only 11 being found out of 800 decorated fragments. As, however, the dish otherwise corresponds closely to the Ting-yao pieces, it seems probable that it should be regarded as a northern Ting-yao specimen.

The small bowl No. 69 lacks foot-rim and has a flat bottom. Judged by its high quality and simple but well executed engraving it seems likely that it is a specimen from a northern Ting kiln. The small bowl No. 70, Pl. 82, should undoubtedly be classified as made at Chien-t'zu-ts'un. The A fragment illustrated on the same plate conforms to it exactly both in regard to size, base and glaze. The rice measure No. 71, Pl. 83, is remarkable not only for its exquisite quality but also because a similar object was sent by the Chinese Government to the Exhibition in London as one of the very few pieces labelled as Sung Ting-yao. It should be pointed out that in the catalogue the Chinese do not refer to southern Ting ware but consistently use the term Sung Chi-chou ware. No. 72 is, like No. 71, a specimen of the highest quality. It is, however, impossible to decide its kiln and age. One can only assume that it is probably a Sung product of Ting-yao type. The bowl No. 73, Pls. 84 and 85, deviates from the above-mentioned pieces classified as northern Ting-yao. The foot-rim is much deeper and slightly drawn in. The panel divisions on the inside, with different designs, are more accentuated than on the other similar bowls in this catalogue. It seems possible that the specimen is a Chi-chou piece. The four bowls Nos. 74—77, Pls. 86—89, lack all points of similarity with Koyama's fragments except the glaze, which is of Ting type, warm and cream-coloured. On the other hand, the bottoms have definite points of similarity with the Chekiang celadons, and the exterior lotus petal pattern brings the same ware to mind. They could well emanate from the same kiln, and (with a question mark) could be grouped with the Chi-chou wares; in any case they belong to a southern type of white Sung porcelain.

The very beautiful bowl No. 78, Pl. 90, is interesting from several points of view. The presence of human figures in a ceramic decoration is, in my opinion, a reason

for dating the specimen not earlier than late Sung. To this may be added that the central wavy design directly recalls the corresponding decoration in under-glaze blue so popular during the early Ming Dynasty. The bowl should therefore be classified as late Sung, and it seems likely that it is a southern ware, possibly Chichou. The shape of the foot-rim excludes the possibility of northern Ting. The bowls Nos. 79 and 80 in Pls. 91 and 92 both have a peculiar dome-shaped recess in the base. This suggests that they may have come from the same kiln, and probably have the same origin as No. 78, Pl. 90. No. 79 resembles, apart from the relief in the bottom, a celadon bowl. No. 80 has a very lovely decoration in relief similar to that of No. 78, and all these four bowls ought therefore to be grouped together.

Pls. 95 and 96 represent another method of engraving, which in both cases is far deeper than on northern Ting specimens. They show no similarity to them, and they are probably southern products. No. 84 is an extraordinary piece, but the very rich design is somewhat overlaid. Here too the late Sung period comes most readily to mind. The jar and the tall vase, Nos. 85 and 86, Pls. 99—101, have identical bases with a roughly trimmed foot-rim and glaze of Ting type. Their provenance is, however, uncertain.

IV.

THE STRUCTURE AND CHEMICAL COMPOSITION
OF T'ANG AND SUNG PORCELAIN

In Sarre (l. c.) analyses are given of shards of porcelain from Samarra. In the shards there was found a mussel-shaped fracture, somewhat grainy and shiny under a magnifying glass. Colour white. Glaze 0.1—0.2 mm thick, transparent and completely vitrified, free from crackles. Result: white porcelain. The chemical analysis of the same shards revealed the following composition:

SiO ₂	60 %
China clay	29 %
Fe ₂ O ₃	0.7 %
CaO	0.9 %
MgO	0.63 %
Alkali (as K ₂ O)	1.6 %

To judge from the chemical composition, the raw material has consisted mainly of pure clays, including kaolin.

A more detailed examination of Samarra porcelain is recorded in Obenauer (Ber. der deutschen Keram. Gesellschaft 1939). Obenauer found that the porce-

lain shards have a far more closely sintered mass, in which only isolated rough grains of quartz lie in an opaque glassy basic mass. They are almost completely melted. In this state they show a distinct isotropic fused edge all round.

Sarre considers that, to judge from the chemical analysis, the raw substances consist for the most part of pure clays.

Sarre also gives data showing how the Samarra porcelain behaves when being fired. He found that the ware was unaffected upon being heated to fusing-point of Seger Cone 8—9 (1265°) but fused when heated to Seger Cone 12—13 (1375°). A shard of porcelain from the Berlin Porcelain factory showed the same ratio.

A shard of Ting-yao from Koyama's discovery of the Ting kilns at Chien-tz'u-ts'un has been examined by the Swedish Geological Survey, for which my thanks are due to the State geologist Nils Sundius, who found the following details:

In a polished section prepared from the shard it is possible to distinguish under the microscope the following components: a vitreous mass in which are scattered grains of quartz in moderate quantities and, far more abundantly, small fragments of a dense colourless substance and a considerable amount of mica. Rough vitreous grains of feldspar are also demonstrable, though only sporadically. They are full of mullite needles, but the line of demarcation between them and the basic mass is somewhat vague. Finally, there are also present in the shard quite small fragments of a glassy substance with low refraction. It may possibly be ground glaze.

The quartz used for this pottery is of a very small and regular size in grain with a maximum dimension of 0.06—0.07 mm. The material consists either of a fine sand which had got into the clay or else of crushed, ground and also probably washed quartz. In the latter case the finely powdered quartz grains testify to very careful preparation.

The numerous dense fragments are of a rounded or roundly elliptical form. The longest diameter seldom exceeds 0.1 mm. In many cases the colourless substance in the fragments looks as if it were quite dense, while in others it is possible to distinguish fine granulation or a fine fibrous quality. In the last-mentioned case a slight double refraction is also perceptible, indicating a building-up of fibres arranged in parallel. These fragments apparently consist of dense clay converted into mullite.

In the vitreous basic mass can be seen numerous tiny needles of mullite in an irregular arrangement.

The pottery must have been intensely fired, as is evidenced by the high vitrification and the formation of mullite in the basic mass, and also by the fact that incipient, thin borders of glass are visible along the outer edges of the quartz grains. In an X-ray photograph made by A. M. Byström, Phil. Lic., the mullite reflexes are stronger than in a photograph of modern insulator porcelain fired at a temp. of 1400°. The two X-ray diagrams are not fully comparable, since the insulator porcelain contains a larger amount of glass than the Ting pottery, a

fact that weakens the reflexes from the mineral; nevertheless the circumstances prove that the firing temperature in the case of the Ting must have been high. Around or just over 1300° is a probable temperature.

The glaze consists of a colourless, low refracting glass (N approx. 1.5) with sparse small remnants of quartz and a few blisters. The glaze adheres direct to the shard without any interjacent engobe. Along the border the mullite is more abundantly and thickly developed than otherwise in the shard, though one cannot speak of the existence of a mullite border.

In a polishing test made on the shard it was found to contain a moderate number of rounded, isolated blisters. In view of the isolated position of the blisters the shard must be regarded as dense. This formation and the distribution of the porosities again give evidence of a high firing temperature.

An analysis of the shard conducted by Captain A. Aaremæe, of the Swedish Geological Survey, has given the following values:

$\text{SiO}_2 = 59.06 \%$	$\text{MgO} = 0.67 \%$
$\text{TiO}_2 = 0.78 \%$	$\text{CaO} = 1.14 \%$
$\text{Al}_2\text{O}_3 = 35.62 \%$	$\text{Na}_2\text{O} = 0.15 \%$
$\text{Fe}_2\text{O}_3 = 0.55 \%$	$\text{K}_2\text{O} = 1.29 \%$
Total 99.62 %	

A spectrographical determination for Cu, Pb, Cr and B carried out by the spectrographical laboratory of the Swedish Geological Survey revealed quite insignificant quantities of those substances, viz. 0.01–0.1 % Cu, traces of Pb and Cr and 0.01–0.1 % B.

The analysis shows that the principal ingredient in the pottery is a clay poor in iron and reduced with quartz. To this have been added as flux a) some lime and magnesia and b) some feldspar. The MgO content in the pottery may be due to an addition of either steatite (magnesium silicate) or dolomite (magnesium-carbonate of lime). The latter seems to be the most likely. For if out of the figure for MgO we calculate the quantity of CaO equivalent to the formula for an MgO-saturated dolomite, we get the figure 0.94 CaO, in which case only 0.2 % CaO would remain of the lime content shown in the analysis. The latter quantity may have been included in the feldspar. The quantity of added dolomite would, if carbonic acid is included, amount to 3.1 %. If free from carbonic acid, the quantity works out at 1.81 %.

If calculated from the figures of the analysis (Na_2O , K_2O and 0.2 CaO), the quantity of added feldspar would amount to 12.85 %. Now there is a considerable quantity of mica in the shard, so that this figure is too high.

The raw material that was prepared in that way has been subjected, after the application of the glaze, to firing at a high temperature, acquiring thereby good density and a transparent quality, both these properties being due to an abundant formation of glass.

V.

CATALOGUE AND PLATES.

The following list gives a short description of each specimen reproduced in the plates, indicating the form, the character of the glaze, the properties of the glaze and slip, the qualities of the body material used, the form and method of potting the base.

Plates Nos. 1—60 cover T'ang porcelain objects the dating of which seems definitely justified.

Plates Nos. 61—63 reproduce specimens of a less certain attribution and specimens showing characteristics of a transition period between T'ang and Sung.

Plates Nos. 66—112 illustrate Sung porcelain specimens. In the catalogue objects belonging to the Carl Kempe collection are marked C. K. and objects from the Gustaf Lindberg collection G. L.

* * *

From Sarre, *Die Keramik von Samarra*:

Fig. a. Shards from a white porcelain bowl with a moulded decoration of fishes.

The same bowl in Pl. 2, b.

Fig. b. Porcelain bowl, back. The same bowl Pl. 2, a.

Fig. c. Profile section of the porcelain bowl Pls. 1, a and 2, b.

Plate 1.

From Sarre, *Die Keramik von Samarra*:

Fig. a. White porcelain bowl, same as in Pl. 1, b.

Fig. b. White porcelain bowl with moulded design on the inside.

Same as Pl. 1, a. Both these specimens are translucent.

Fig. c. Bowl with white glaze and body, not translucent.

Rolled rim and low, broad base, like Fig. a.

Figs. d—f. Fragments of typical Yüeh cups and bowl with mottled T'ang glaze, typical T'ang and found on the same site as the porcelain specimens.

Plate 2.

From Hobson, *The Significance of Samarra*, Transactions of the Oriental Ceramic Society, Vol. 1922—1923:

Fig. a. Part of the bottom of a shallow bowl. White well vitrified porcelain with greenish-white glaze, which forms in drops in the lower parts. Base partly glazed, and base-rim bevelled at the outer edge and rough with kiln-grit. No decoration.

Fig. b. Bottom of a bowl of pure white porcelain with conchoidal fracture highly vitrified; the glaze faintly greenish on the outside and running in gummy tear-drops, but a clear white inside.

The base is unglazed and shows faint thread-lines; the base-rim is low and unglazed and lightly bevelled at the edge.

Fig. c. Part of the side and lip of a bowl. White porcelain with white glaze of faintly creamy tone. The rim is slightly turned outwards and the sides lobed.

Plate 3.

From Hobson, *The Significance of Samarra*:

Fig. a. Bottle-shaped vase with elongated neck, spreading mouth-rim and low foot-rim, the base glazed, white porcelain with white glaze; the ware resembles that displayed in some of the fragments of Pl. 3.

Fig. b. Bottom of a dish with nicked mouth-rim, giving the appearance of a foliate edge; white glaze running into gummy tear-drops. The body is highly vitrified white porcelain. The foot-rim is bevelled at the outer edge and kiln-grit adheres to it in places and to the base surface.

Plate 4.

1.

Shallow bowl with rounded sides and rolled mouth-rim.

Glaze colourless, or, where it has run thick, faintly greenish, uncrackled and with a smooth surface, ending at the base-rim. Pure white slip covering the entire inner surface and stopping below the rolled rim.

Body white with a greyish tint where not covered by the slip. Porcelain in parts translucent.

Foot-rim very low and broad, unglazed and roughly trimmed and bevelled at the outer edge.

D. 153 mm. H. 50 mm. C. K. 180.

Plates 5 and 19.

2.

Shallow bowl with rounded sides and the mouth-rim rolled on the outside.

Glaze opaque from influence of the soil, thickly applied, uncrackled, soft-looking, on the inside white, on the outside greyish with a tint of blue. It stops short of the base.

A white slip covers the inside and ends at the rolled rim.

Body: white porcelain with a distinct tint of grey, hardfired and resonant, translucent.

Base: typical Samarra foot, entirely unglazed, with rather broad foot-rim, roughly trimmed and bevelled at the outer edge.

D. 150 mm. H. 45 mm. G. L.

Plate 6.

3.

Large bowl with plain rounded sides showing circular facets from the wheeling, and broad base. The mouth-rim rolled on the outside by a narrow semi-circular band of clay.

The glaze is colourless with a tinge of cold greenish blue, milky and not quite transparent and uncrackled. It ends about 20 mm. from the base, leaving the bisquit bare in an irregular line, in the T'ang manner.

A clean white slip covers the interior surface.

The body is a typical Samarra porcelain, dry and greyish white. It transmits light easily, is hard and resonant.

The base is entirely unglazed. The base-rim is fairly narrow, very roughly trimmed, bevelled at the outer edge. Circular lines on the bottom of the base.

D. 200 mm. H. 80 mm. G. L.

Plates 7 and 8.

4.

Saucer or tea bowl, heavily potted, with rounded sides and a broad strengthening band of clay applied on the outside immediately below the mouth-rim, which is comparatively sharp.

Glaze uncrackled and lustrous, colourless, except some bluish-tinged parts where the glaze has run thick. The glaze covers the entire surface both on the inside and on the outside, but stops short of the base.

A pure white slip covers the inside and stops at the band on the outside of the rim.

Body: porcelain of T'ang type, translucent, white or greyish-white.

The base-rim is very low, unglazed and broad, bevelled at the outer edge. The base-rim has been carefully modelled by a sharp and vigorous turn of the wheeling tool, leaving a horizontal circular area from which the base-rim projects.

D. 140 mm. H. 40 mm. G. L.

Plate 9.

5.

Small saucer, evidently from the same kiln as No. 4, Pl. 9. Rounded sides and a broad strengthening band of clay around the outside of the mouth-rim. The interior surface very neatly potted to the shape of a concave lens.

The glaze is very hard, glossy and transparent, uncrackled, colourless with a faint tinge of blue, especially on the outside where it has run thick. The impression given by the bowl is a very cold white. The glaze stops at some distance from the base in an irregular line.

A clean white slip covers the inside and ends at the band on the outside of the rim.

Body: hard and resonant T'ang porcelain of a white or greyish-white porcelain, translucent.

The foot low, of Samarra type, unglazed and with a rather broad rim, bevelled at the outer edge, more neatly potted than many other bases here described.

D. 110 mm. H. 30 mm. G. L.

Plate 10.

6.

Large deep bowl of beautiful conical form with slightly rounded sides and some contraction of the mouth-rim. Inside bottom flat, corresponding to the foot. The bowl gives the impression of dull, white marble of a very cold white colour. The glaze has a dull surface due to the influence of the soil. It is colourless and entirely uncrackled and shows on the outside numerous tear-drops distinctly bluish tinged. It contains a few bubbles where it runs thick and stops in an irregular line some 30 mm. above the base.

A clean white slip covers, in a rather thick layer, the inside of the bowl and ends on the outside, in an irregular line, at some distance from the rim; it runs thick in rolls and drops, as does the glaze.

The body is a typical Samarra porcelain, dry and greyish white, easily transmitting light, very hard and when struck giving a long-drawn-out musical tone.

The base is a typical Samarra foot-rim, very low, set off from the body by a sharp turn with the wheeling tool, with a broad bevelling of the outer edge, entirely unglazed, as is the bottom surface within it.

D. 190 mm. H. 83 mm. G. L.

Plates 11 and 8.

7.

Large bowl with straight sides, circular. The mouth-rim in five-foil form with five soft bulging indentations most artistically arranged. Heavily potted specimen of a beautiful, well-balanced flower form.

Thick, transparent almost colourless glaze with faint bluish tint where it is thick as on the outside. The glaze stops in rounded circular sweeps some 10 mm. above the base.

Thick clean white slip covers the entire inside and stops in heavy drops and rolls on the outside at different distances from the rim.

Body: a dry, white, faintly greyish porcelain, quite translucent. The bowl thus shows a clean white colour on the inside and a slightly greyish white on the outside.

Base: low, typical Samarra foot, somewhat spreading on the outside and the inside, entirely unglazed, roughly trimmed and slightly bevelled at the outer edge. Circular lines on the inside bottom surface, which has been stained reddish by the soil, as have some other spots on the glazed parts of the bowl.

Exhibited National Museum Stockholm 1949, Kunstindustrimuseum Copenhagen 1950; for a similar type cf. Charles B. Hoyt coll., Exhib. Boston 1952, No. 164.

D. 230 mm. H. 100 mm. C. K. 101.

Plates 12 and 40.

8.

Bowl of depressed globular form with five-lobed sides. The mouth-rim curved in and mounted with a horizontal band of clay with two grooves.

Glaze uncrackled, colourless, with a slight bluish tint where it runs thick, also covering the outside of the foot.

White slip covering the entire surface with exception of the foot-rim, which is a typical Samarra foot, slightly spreading.

Body: slightly greyish, translucent T'ang porcelain.

D. 110 mm. H. 70 mm. C. K. 164.

Plate 13.

9.

Cup with slightly everted mouth-rim with five foliations. Glaze colourless and uncrackled, stopping at the base-rim. Clean white slip covering the inside and part of the outside.

Body: white translucent porcelain.

Base: typical Samarra foot, unglazed, low and roughly trimmed.

H. 100 m. D. 60 mm. C. K. 168.

Plate 13.

10.

Bowl of depressed globular form. Mouth like that of No. 8, but with one groove only.

Glaze unctuous and thick, of a greyish-blue colour, stopping on the outside of the base-rim.

Base: a typical, low and broad Samarra foot, entirely unglazed and spreading at the inner edge.

Clean white slip covering the inside and part of the outside.

Body: white, slightly greyish porcelain of the typical dry Samarra kind, translucent.

D. 105 mm. H. 65 mm. C. K. 126.

Plate 14.

11.

Jar of globular shape with low, straight mouth-rim and foot-rim.

Glaze uncrackled and lustrous, colourless with an ivory tint, stopping above the base.

No slip.

Body: white, translucent porcelain, neatly potted.

Base entirely unglazed. Foot-rim straight on the outside, spreading on the inside.

H. 57 mm. C. K. 135.

Plate 15.

12.

Water-pot of depressed globular form with small mouth, surrounded by a low rounded ring, and with five-lobed sides. Three low feet applied to the base-rim.

Glaze thick and unctuous, white to cream-white.

A white slip covers the body but not the base.

Body: pure white, translucent porcelain.

Base unglazed, flat beneath.

D. 75 mm. H. 55 mm. C. K. 167.

Plate 16.

13.

Water-pot of globular form with the sides formed into six lobes, each of them surrounded by a fine, incised line.

Small mouth with vertical, thin mouth-rim. Around the neck an incised pattern of six petals.

Three small animals' feet. The bottom glazed and convex. Glaze delicate and unctuous, of a cold pure white colour.

No slip.

Body: fine white, very translucent porcelain, thinly potted.

On the base an incised character: Kuan.

D. 60 mm. H. 55 mm. C. K. 128.

Plate 16.

14.

Jar with cover on three small feet, and of a flattened globular form; circular rings of clay on the shoulder. On the sides two series of fan-shaped lines, raised with a needle.

Glaze thick greyish white or colourless, dull, uncrackled.

Thick, clean white slip covering the body on both inside and outside and ending in thick drops towards the base.

Body: white translucent porcelain.

Cover with a convex surface, adorned with a figure of a child, playing in a prone position.

D. 105 mm. H. with cover 110 mm. C. K. 416.

Plate 17.

15.

Box of cylindrical shape with flattened cover, conical knob and spreading foot. Two circular lines around the shoulder.

Glaze fine, white and soft-looking with a faint bluish-green tint, giving a cold appearance. The glaze covers the body on both inside and outside.

There is probably a pure white slip covering the body.

Body: white T'ang porcelain, translucent in the thinner parts.

For the shape see Eumorfopoulos Catalogue, Vol. 6, pl. 13, F 53.

D. 75 mm. C. K. 108.

Plate 17.

16.

Bowl of semi-globular form. The mouth-rim curved in and mounted with a horizontal, wavy band.

Glaze thickly applied, transparent and without crackles, of a warm ivory-white colour, tinted bluish in the thicker layers, extending to the base or nearly so.

A clean white slip covers the inside.

Body: transparent white porcelain, slightly greyish where not covered by the slip.

Base with a typical, slightly spreading Samarra foot-rim, roughly trimmed and in part bevelled at the outer edge. Bottom surface within it unglazed and showing the dry body.

D. 124 mm. C. K. 105.

Plates 18 and 19.

17.

Bowl of semi-globular form with plain rounded sides. The mouth-rim curved in, mounted with a horizontal band, the outer edge of which is waved very neatly with a tool.

Glaze thick and unctuous, opaque and of a very beautiful grey colour. It covers the whole inside and ends on the outside at some distance from the base.

A white slip covers the inside and on the outside it ends in an irregular line on the shoulder.

Base typical Samarra, wide and with a broad, rather neatly formed rim, bevelled at its outer edge. The whole base entirely unglazed.

D. 135 mm. H. 70 mm. G.L.

Plates 20 and 21.

18.

Bowl of semi-globular form with plain rounded sides. The mouth-rim potted thin and rolled outwards, and then waved in its outer edge.

The glaze is colourless and glossy, uncrackled, thinly applied, transparent and

slightly greyish blue in the thicker layers, viz. in the wavy sections around the rim. Numerous tear-drops on the outside. The glaze continues to the base and stops in an irregular line on the outside of the foot-rim.

There is no slip.

Body: fine, clean white porcelain, translucent with a white light; together with the glaze it gives the bowl a very cold, pure white colour with a very faint tinge of blue.

Base: typical Samarra, very low and unglazed except for some glaze on the outside, roughly trimmed, slightly bevelled and with adhering kiln-grit.

D. 130 mm. H. 60 mm. G.L.

Plate 22.

19.

Bowl with rounded sides and rolled mouth-rim.

Glaze translucent, uncrackled, ending at the foot-rim; it has a faintly greyish-green, very cold colour.

There is probably no slip.

Body: fine, white porcelain of high quality and easily transmitting light.

Base: typical Samarra.

D. 180 mm. H. 70 mm. C.K.

Plate 23.

20.

Shallow bowl or cupstand of an unusual and beautiful shape. The mouth-rim five-lobed through five indentations with the edge folding over inwards; between those, five narrow ridges, delimiting five panels. A circular ridge surrounds the central bowl-shaped part.

Colourless, slightly bluish glaze, uncrackled and smooth, stopping at the base.

Body: translucent porcelain of a distinct light-greyish colour.

There is no slip. The body thus gives the entire specimen a greyish tone.

The base shows a typical Samarra foot, unglazed and roughly trimmed; the bottom surface within it unglazed.

D. 140 mm. H. 30 mm. C.K. 132.

Plates 24 and 25.

21.

Vase of a beautiful ovoid shape with tall slender neck starting from a circular ridge at the top of the body and with a broad everted mouth-rim. Glaze dull and soft-looking, white, with a tinge of greyish blue, uncrackled and extending to the outside of the foot-rim.

A white slip covers the entire outside and probably the inside of the vase.

Body: typical Samarra, greyish white.

Foot-rim very low and of typical Samarra shape. It is roughly turned with circular lines from the wheeling visible, and with kiln-grit adhering to the unglazed bottom of the rim and to the bottom surface within it.

H. 180 mm. C.K. 117.

Plate 26.

22.

Tea-bowl of floral shape, with the sides formed into five rounded lobes through five deep grooves extending from the mouth-rim towards the base. Very vigorous and artistic potting, with rather thick walls and a rounded glazed mouth-rim. The interior bottom has a carved circular groove in the centre.

The glaze is lustrous, uncracked and completely uninfluenced by the soil, colourless, but with a bluish-grey tone in parts where it is thick. The glaze extends to the base-rim.

A pure white slip covers the entire inside and stops in an irregular line at the rim.

Body: translucent porcelain of white colour with a tinge of grey.

Base-rim typical Samarra. Very low, unglazed and roughly trimmed. The recess unglazed, except for an accidental splash of glaze. Lumps of kiln-grit on both sides of the base-rim.

D. 124 mm. C.K. 104.

Plate 27.

23.

Saucer of floral form with rounded sides and sharpened mouth-rim appearing like a vertically placed band, at the top slightly bending inwards.

Glaze greyish blue, matted on the surface and non-transparent owing to the influence of the soil and on the outside stopping in an irregular line, far from the base, in a typical T'ang manner. Tear-drops distinctly blue.

A white slip covers the interior and parts of the outside, stopping in an irregular line.

Body: greyish white, hard resonant porcelain, translucent.

Base: typical Samarra shape, low and entirely unglazed, roughly trimmed.

D. 110 mm. H. 35 mm. G.L.

Plates 28 and 31.

24.

Saucer or shallow bowl of floral form. The mouth-rim has five indentations and the rounded sides are formed into five lobes by five shallow grooves from the mouth-rim towards the base.

The interior bottom has a circular carved groove.

Glaze lustrous, uncracked and very resistant to the influence of the soil, colourless or faintly cream-coloured, but with traces of blue where it has run thick.

A clean white slip covers the inside and stops at the mouth-rim.

Body: fine porcelain of white colour, slightly greyish, translucent.

Base-rim very low, of typical Samarra shape. The glaze extends to the outside of this base, but the rest of it and the bottom surface within it are unglazed.

D. 127 mm. C.K. 152.

Plate 29.

25.

Tea-bowl of a beautiful floral form. The rounded sides are formed into five rounded lobes by five deep grooves. The potting is very vigorous and artistic.

The inside bottom has a circular carved groove in the centre.

The glaze is thickly applied, lustrous, uncrackled and highly resistant to the influence of the soil, colourless or with a very faint tinge of cream-colour, and of a greenish-grey tone where it has run thick. It extends to the base-rim.

A clean white slip covers the inside of the bowl and stops at the mouth-rim.

Body: porcelain, hard and resonant, white with a tinge of grey. The base-rim has a typical Samarra shape, very low, unglazed and roughly trimmed. The outside of the base is irregularly glazed, the inside and the bottom surface within it are unglazed.

D. 155 mm. H. 70 mm. G.L.

Plates 30—32.

26.

Saucer of floral shape with rounded sides, formed into five lobes from the mouth-rim towards the base. Heavy but artistic potting, the rim rounded and glazed.

The inside bottom has a carved circular groove in the centre.

The glaze is transparent, lustrous, uncrackled and highly resistant to the influence of the soil, almost colourless, with a faint tinge of cream colour and of a bluish-green colour where it is thick. It extends to the base-rim.

A pure white slip covers the interior of the bowl and stops exactly at the mouth-rim.

Body: hard white porcelain, resonant and with a tinge of grey on the outside where there is no slip.

Base of Samarra type, very low and roughly trimmed, slightly bevelled. The outside of the foot-rim is irregularly glazed, the inside and the bottom surface within it are unglazed.

D. 130 mm. H. 40 mm. G.L.

Plate 33.

27.

Stem-cup, semi-globular, on high foot, the latter hollowed out and spreading, bevelled on the base-rim.

Transparent glaze of a pure white colour, slightly cream-coloured where thickly applied and covering the whole piece except the interior of the stem.

No slip is visible.

The cup is carefully trimmed and shows facetting from the wheeling.

Body: fine white porcelain, translucent.

For a similar type see Los Angeles Chinese Exhibition Catalogue 1952, no. 98, Stem Cup, Hsing ware.

D. 78 mm. H. 114 mm. C.K. 430.

Plate 32.

28.

Dish of a beautiful three-foil floral form, with three deep foliations, each of them ending in a neatly potted point. The inside bottom has a small circular flat area.

The glaze is transparent, white, colourless, uncrackled and with wax-coloured tear-drops on the outside, stopping at the foot-rim.

A clean white slip covers the inside and part of the outside.

Body: white porcelain, quite translucent.

Base-rim: typical Samarra foot, broad and very low, unglazed and rough in comparison to the very careful potting of the vessel itself.

Exhibited Copenhagen 1950.

D. 120 mm. C.K. 127.

Plate 34.

29.

Dish or shallow bowl formed as a wide-open flower, with the mouth-rim divided into five rounded lobes through five rounded indentations. The dish is vigorously and artistically potted and has a very well-balanced shape. The sides are rounded, the inside bottom flat with a circular groove, marking the beginning elevation of the sides.

The glaze is glossy, completely transparent, uncrackled and very hard; it has a pleasant bluish-white colour, and continues to the base-rim. A clean white slip covers the inside and stops exactly at the mouth-rim, which is glazed. The bowl thus appears white inside but grey on the outside.

Body: light grey, hard-fired and very resonant porcelain, quite translucent.

The base is a typical Samarra foot, roughly trimmed and bevelled at the outer edge, its outside glazed, its inside and the bottom surface within it unglazed. Lumps of kiln-grit on the base-rim and adjacent parts of the sides.

D. 180 mm. H. 40 mm. G. L.

Plate 35.

30.

Pair of dishes or shallow bowls of floral form, mouth-rim with five deep indentations, rounded sides and flat inside bottom, corresponding to the base-rim.

Glaze colourless, uncrackled and lustrous. The glaze shows a greenish colour on the outside in the parts where it has run into tear-drops, and it stops at the base.

Clean white slip on the inside, ending at the mouth-rim, the latter glazed.

Body: dry, white, greyish translucent porcelain.

Base-rim: very typical Samarra foot, low and roughly trimmed and bevelled at the outer edge, unglazed and with unglazed bottom surface within it.

D. 150 mm. C. K. 170.

Plates 36 and 37.

31.

Miniature ewer with ovoid elongated body, trumpet neck with everted and slightly rolled mouth-rim. Double loop-handle and short vertical, conical spout.

Clean white, soft-looking glaze, transparent and uncrackled, with a faint creamy tinge, stopping above the base, which is of Samarra type.

A pure white slip covers most parts of the glazed surface.

Base-rim spreading and flat beneath, showing traces of the wheeling.

H. 85 mm. C. K. 166.

Plate 38.

32. a, b.

Miniature ewers with ovoid body, beautifully and very carefully turned, a short spreading neck with everted mouth-rim, short vertical spout and handle in form of an animal standing on the shoulder of the vessel and looking into its mouth.

Thin transparent and uncrackled glaze of Samarra type, tending to a greenish colour when running into drops, and ending above the base, leaving the bisquit bare.

A white slip covers the neck and the shoulder of the specimen.

Greyish-white porcelain of Samarra type as translucent as a fine Ching porcelain specimen.

Base spreading, bevelled and flat beneath.

The glaze is so hard as to make it difficult to clean the surface from glaze accumulations with a carborundum tool.

For vessels of exactly the same shape see Eumorfopoulos Catalogue, Vol. 1, Pl. 74, A 503, Private Collections, fig. 82, and The Art of the Chinese Potter, Pl. 29.

H. 94 mm. C. K. 119.

Plates 38 and 39.

33.

Deep cup with straight sides.

Colourless glaze with a faint greenish-grey tint. Some craquelures in the glaze towards the base. The glaze stops at some distance from the base.

Body spreading upwards and bottom flat; carefully potted.

H. 66 mm. C. K. 106.

Plate 39.

34.

Shallow bowl of floral form, with everted mouth-rim showing five indentations, each accompanied by a narrow ridge on the inside wall, which goes straight down to the flat bottom, which has the same circumference as the base-rim.

Glaze rather thick, colourless and with a bluish tone where accumulated, uncrackled.

White slip covering the entire inside and part of the outside.

Body: white, translucent porcelain.

Foot-rim low, of Samarra type, unglazed.

D. 170 mm. C. K. 114.

Plate 40.

35.

Ewer with elongated ovoid body, trumpet neck with spreading mouth-rim, short spout and vertical loop-handle.

Smooth glaze of a cold white colour, transparent and without crackle, a little greyish in appearance, probably owing to the underlying slip. The glaze continues to the base-rim.

White or greyish-white slip covers the glazed parts.

Body: greyish-white porcelain of Samarra type, translucent in the thinner parts.

Base spreading.

Formerly in the Alexander Collection.

Illustrated by R. L. Hobson, *The Collector* 1930.

H. 210 mm. C. K. 117.

Plate 41.

36.

Jar with ovoid body, carefully potted. Mouth-rim low, with everted and rolled edge.

Glaze non-transparent, milky and of an ivory colour with a tinge of grey; it has a dull lustre and is very evenly applied, entirely uncrackled.

There is no slip.

Body: fine white porcelain, translucent.

The base is flat with a smooth surface as if ground before the firing, and the edge of the base is trimmed and carefully cleaned from glaze, evidently with a tool.

D. 134 mm. H. 134 mm. C. K. 176.

Plate 42.

37.

Jar, globular, with short, rolled neck and without base-rim.

Glaze on the inside colourless, with a delicate bluish tinge, transparent and covering the entire inner surface. On the outside semi-opaque, uncrackled, unctuous and fat, of greyish-white colour due to discoloration by the soil. The neck and

tear-drops on the body show a bluish-white colour. Some 10 mm. above the base the glaze has been removed with a tool before the firing and the under surface has been trimmed flat very carefully, as if ground. There is a sharp angle between the sides and the base, and no bevelling.

No slip.

The body is a fine white, slightly greyish porcelain of T'ang character and quite translucent.

Cf. *The Art of the Chinese Potter*, Pl. 30, Fig. 2.

H. 120 mm. D. 125 mm. G. L.

Plate 43.

38.

Kundika vessel, sprinkler for holy water; bronze form with high-shouldered body of ovoid shape, tall tapering neck with low domed cap.

The glaze is of Samarra type, soft-looking, uncrackled and transparent, of a faint bluish-green tinge, covering also the surface of the base.

A pure white slip covers the outside of the vessel.

Body: white porcelain with a faint greyish tinge, translucent in the thinner parts.

Base bevelled where the glaze stops. Foot-rim of Samarra type, broad and with a recess.

For the shape cf. *Eumorfopoulos Collection*, Vol. 6, Pl. 47, F 30 and Pl. 50, F 327.

Sprinklers of this form can be seen in the hands of Buddhist saints or divinities in the T'ang pictures brought back by Sir Aurel Stein from Tun-huang.

H. 110 mm. C. K. 125.

Plate 44.

39.

Bowl (one of a pair), shallow and with rounded sides and everted mouth-rim.

Glaze very lustrous, colourless, with a faint tinge of cream, glassy and transparent, uncrackled. Numerous tear-drops on the outside, slightly wax-coloured. The glaze stops in an irregular line at some distance from the base.

A pure white slip covers the inside of the bowl.

Body: fine white porcelain with a dry surface and easily transmitting light.

Base-rim very low, typical Samarra, broad and bevelled, with a small central recess, and entirely unglazed.

D. 100 mm. H. 30 mm. G. L.

Plate 45.

40.

Bowl with rounded sides, low and with a broad base-rim.

Glaze uncrackled, colourless, thickly applied and very unctuous and pure; it ends at the foot, and covers the inside of the base-rim.

Thick pure white slip applied on the inside and accumulating on the outside, below the mouth-rim, into thick drops, easily visible.

Body greyish-white where not covered by the slip.

Base-rim low and broad, roughly trimmed but not bevelled.

D. 157 mm. H. 30 mm. C. K. 163.

Plate 46.

41.

Shallow bowl with rounded five-lobed sides, inside bottom flat corresponding to the wide foot.

Glaze thick, greyish or bluish white, dull through the influence of the soil, ending at the foot.

Clean white slip covering the inside and part of the outside.

Base: typical Samarra foot with patches of sand, the bottom surface inside the foot-rim glazed.

Body: greyish white, translucent porcelain.

D. 104 mm. H. 30 mm. C. K. 152.

Plate 47.

42.

Cup-stand, saucer-shaped, with a stop-ridge in the centre to hold the cup.

Glaze heavy and of varying thickness, colourless and free from crackle, slightly greenish-blue where it has run thick. It stops above the base.

A clean white slip covers the inside.

The foot-rim is low, of typical Samarra character, unglazed.

D. 95 mm. C. K. 144.

Plate 47.

43.

Large bowl with conical form and straight sides from a broad base-rim. The mouth-rim symmetrically divided into nine rounded foliations by deep indentations. Inside bottom flat, corresponding to the foot.

Glaze greyish with a tint of blue when running thick, opaque through the influence of the soil and ending in an irregular line short of the base with drops and rolls in a typical T'ang manner.

It is difficult to decide whether there is a slip on the inside.

Body: typical Samarra porcelain, dry and white, with a slight greyish tinge, translucent.

The base-rim is set off from the body with several sharp turns with the wheeling knife, it is low and the rim itself narrow, roughly trimmed and unglazed, as is also the entire bottom surface within it.

D. 230 mm. H. 140 mm. G. L.

Plates 48 and 52.

44.

Dish or flat bowl with scalloped mouth-rim divided into lobes, which do not extend to the sides, and with flat inside bottom surface, corresponding to the broad base-rim.

Glaze translucent and colourless, uncrackled, covering the entire surface, including the mouth-rim and the outside bottom surface.

There is no slip.

Body: clean white porcelain, translucent.

Base broad and low, bottom of the rim unglazed and not of Samarra type, but trimmed to a rounded form.

D. 135 mm. C. K. 131.

Plate 49.

45.

Wine-bowl, elliptical, flower-shaped, with six-lobed sides, the deep lobes arranged as in an *Amaryllis* flower, the potting heavy and vigorous.

Glaze clean white, faintly greenish where running thick, uncrackled.

There is probably no slip.

Body: pure white porcelain, easily transmitting light and of a very high quality.

Foot low and straight, of four-lobed form, unglazed.

D. 105 and 121 mm. H. 40 mm. C. K. 165.

Plates 50 and 23.

46.

Small bowl with everted mouth-rim and the sides concave in the upper part, convex in the lower, with a prominent ridge between them.

Glaze thin, transparent, colourless and without crackle. The glaze stops a little above the base.

Body: fine, pure white porcelain, quite translucent.

The foot-rim low, unglazed, spreading both inside and outside, carefully potted, slightly bevelled at the outer edge.

There is no slip.

D. 105 mm. H. 38 mm. C. K. 110.

Plate 50.

47.

Bowl with everted mouth-rim and of a form occurring in silver bowls, with the sides concave in the upper part, convex in the lower, with a prominent ridge separating them. The bowl is, except for the size, exactly like the smaller bowl above.

The glaze is thin, colourless and transparent, glassy and uncrackled, lustrous on the outside, dull and soft-looking on the inside, very carefully applied and without tear-drops. It ends short of the base in a typical T'ang manner.

There is no slip.

Body: fine, clean white porcelain, translucent.

Base very low, entirely unglazed, spreading both inside and outside, carefully potted, somewhat irregularly bevelled.

D. 160 mm. H. 70 mm. G. L.

Plates 51 and 52.

48.

Jar or incense burner of depressed globular form, the mouth-rim contracted and with three ridges around it. Two parallel incised lines around the shoulder.

Glaze colourless and transparent, uncrackled and soft-looking, fat and unctuous. It extends to the outside of the base-rim.

There is no slip.

Body: very fine, clean white porcelain, translucent.

Base-rim spreading both outside and inside, bevelled and unglazed, except for some part of the exterior. Bottom surface within it unglazed, of fine texture.

D. 110 mm. H. 70 mm. G. L.

Plate 53.

49.

Deep cup with everted mouth-rim and small foot, neatly potted to the shape of a bell.

Thin glaze, transparent, uncrackled and colourless, stopping in an irregular line at some distance from the base, and faintly greenish coloured where it has run thick.

There is no slip.

Body: white porcelain, translucent and very easily transmitting light, towards the base trimmed into circular facets.

Base solid, slightly spreading, flat or slightly concave beneath.

D. 76 mm. H. 74 mm. G. L.

Plate 53.

50.

Miniature jar of globular form with contracted mouth and two concentric incised lines around the mouth.

Glaze white, transparent, uncrackled and colourless, with a very faint tinge of grey where it has run thick, and stopping 10 mm. above the base.

There is no slip.

Body: fine white porcelain with a tinge of grey, very translucent, with a pure white light.

Base-rim low, unglazed, solid and flat beneath, with a circular line from the wheeling; bottom surface within it slightly concave.

D. 45 mm. H. 40 mm. G. L.

Plate 54.

51.

Globular bowl with contracted mouth surrounded by two concentric incised lines. Glaze translucent and colourless, stopping above the foot, uncrackled and lustrous. Body: white porcelain with a faint greyish tone, and with a high degree of translucency.

Base showing a typical Samarra foot, unglazed and roughly trimmed, with a large unglazed bottom surface within the rim.

H. 66 mm. C. K. 134.

Plate 55.

52.

Miniature urn in the shape of a Greek amphora, with two vertical loop handles (one missing), moulded in basket-work shape; short, straight neck and with a typical Chinese base. On the shoulder circular lines from the wheeling.

Glaze soft-looking, of a dull lustre and a light grey colour, semi-opaque, with numerous bubbles, and covering the entire surface both inside and outside, but stopping at the top of the base.

There is no slip.

Body: fine white porcelain, easily transmitting light.

Base high and solid, strongly spreading and bevelled, somewhat concave beneath. The base is slightly reddish-coloured from the firing.

H. 53 mm. G. L.

Plate 54.

53.

Semi-globular bowl in the shape of a buddhist alms bowl with slightly curved-in mouth-rim.

Glaze translucent, uncrackled, thick and unctuous, colourless, stopping above the base.

Body: white, possibly faintly greyish, porcelain, easily transmitting light.

Base unglazed and without a foot-rim.

There is probably no slip.

D. 160 mm. H. 77 mm. C. K. 136.

Plate 56.

54.

Dish or shallow bowl with rounded sides and five indentations in the mouth-rim, which is everted horizontally, and broad flat inside bottom corresponding to the foot-rim and delimited by an incised circular groove.

Glaze cold white, when thick partly wax-coloured, partly of a greenish-grey colour. The glaze extends to the base, which is unglazed, as is the bottom surface inside.

A pure white slip covers the interior surface.

Body: white porcelain, translucent.

The base is not of Samarra type. The foot-rim is low and strongly spreading both outside and inside. It is very narrow and neatly potted in a manner that reminds one of the foot of a T'ang metal vessel.

D. 158 mm. H. 35 mm. C. K. 175.

Plate 57.

55.

Dish or shallow bowl of the same ware as the preceding, with rounded sides, horizontally everted mouth-rim and five indentations. The inside bottom flat and broad, delimited by a circular incised groove. Glaze white, milky and not translucent owing to the presence of numerous minute white particles in the glaze, glossy and, where running thick, of a slightly greenish-waxy colour. It extends in an irregular line to the outside of the base.

Body: white porcelain, translucent.

There is probably no slip.

The base is not of Samarra type but is trimmed like a metal foot-rim into a very narrow and carefully potted base-rim, spreading both inside and outside; the inside of the rim and the bottom surface within it are unglazed.

D. 135 mm. H. 30 mm. G. L.

Plate 58.

56.

Shallow bowl with rounded sides and elaborately cut foliate mouth-rim.

Glaze transparent, colourless, without crackles and giving a cold white colour due to the visible underlying slip. The glaze extends to the outside of the foot, but ends at the foot-rim, leaving the inside of the foot-rim and the bottom surface within it free from glaze.

A clean white slip covers the inside of the bowl, while the outside is free from slip.

Body: fine white porcelain without the common greyish tint.

The base is broad and definitely spreading. The foot-rim itself is very narrow and neatly formed into the shape of a metal foot-rim. It is entirely different from the Samarra foot.

D. 170 mm. C. K. 107.

Plates 59 and 60.

57.

Shallow bowl of floral form, with rounded sides, not lobed, and thinly potted to a shape of Ting-yao type. The mouth-rim has five broad and shallow indentations, each of them followed up on the inside by a narrow rib. On the outside, circular striations from the wheeling.

The glaze is thin and almost colourless, with a faint ivory colour in the thicker parts, and stopping above the base.

Body: thin resonant porcelain of a white colour.

There is no slip.

The base is unglazed and of typical Samarra form, but smaller in proportion to the diameter of the vessel.

D. 156 mm. H. 40 mm. C. K. 130.

Plate 61.

58.

Bowl of floral shape thinly potted like a Sung Ting piece, with plain rounded sides and the mouth-rim divided into five foliations by five indentations. On the inside these continue as narrow ribs. The rim itself is glazed all over. The inside bottom is convex, and in size it corresponds to the base.

The glaze is very thin, of a soft lustre, colourless, uncrackled; on the outside it has run into numerous tear-drops of a wax-like or slightly greenish colour, indicating baking in an upright position. The glaze extends over the outside of the base. The bowl gives an impression of a white colour intermediate between the cold Samarra and the warmer Sung Ting-yao colours.

There is no slip.

Body: a pure white porcelain, hard-fired and very resonant.

The foot-rim is very low, glazed on both sides, but unglazed beneath. It is somewhat roughly trimmed and bevelled at the outer edge. Kiln-grit adheres to the base. The bottom surface inside the rim is glazed.

D. 150 mm. H. 45 mm. G. L.

Plate 62.

59.

Bowl, shallow, thinly potted as a Sung Ting piece, in potting and size identical with the bowl No. 58. The sides rounded, on the outside circular striations from the wheeling. The mouth-rim has five lobe indentations, each continued on the inside by a narrow rib. The rim itself is glazed.

Glaze thinly applied, of a greyish-waxy colour, transparent and uncrackled, giving the bowl an appearance of a Ting-yao bowl with a somewhat too dark glaze. The glaze extends to the outside of the base.

There is no slip.

Body: white porcelain, hard-fired, very translucent and resonant.

The base is a typical Samarra foot-rim, though glazed on both sides, but unglazed beneath. The foot-rim is very roughly trimmed and bevelled, with lumps of kiln-grit adhering to it, as also to the lower parts of the body. The bottom surface inside the foot-rim is partly glazed.

D. 150 mm. H. 45 mm. G. L.

Plate 63.

Ting-yao shards.

A shards from the Ting-yao kiln-site at Chien-tz'u-ts'un, collected by Tojiro Koyama when the site was discovered. Fine white porcelain shards showing a sugary fracture. Thin, cream-coloured, transparent glaze, containing few bubbles. Carved design of lotus and arabesque.

Plate 64.

Ting-yao shards.

Same shards as on Plate 64, from the back, showing the important characteristics of the northern Ting-yao foot.

The foot-rim is very low, neatly potted into a narrow ring with straight sides, and exactly horizontal beneath, without marks of the tools used, and without the circular striations from the wheeling which are common in T'ang pieces. The horizontal bottom surface within the foot-rim is glazed, as is also the entire base, but there are some small irregularities due to grit in the saggars used. There has been no trimming of the foot after the baking.

Plate 65.

60.

Shallow bowl of floral form, carefully potted, with slightly six-lobed sides and with six corresponding shallow indentations in the slightly everted mouth-rim.

Glaze thin and translucent, uncrackled, cream-coloured, evenly distributed and covering the entire vessel except the mouth-rim and parts of the foot-rim.

Body: fine white porcelain, transmitting an orange-coloured light.

The base is not of Samarra form nor of Ting-yao form. It is roughly trimmed both inside and outside, and the glaze is here removed. Thus the base corresponds in several respects to that of the Ting-chou inscribed dish belonging to Sir Percival David (David Catalogue Pls. 91 and 92).

Early Ting yao?

D. 155 mm. H. 50 mm. C. K. 390.

Plate 66.

61.

Shallow bowl with six indentations in the mouth-rim and the rounded sides slightly six-lobed. Very carefully executed, thin potting.

The mouth-rim itself is carefully made free from glaze, which is left in the indentations. The glaze is thin, slightly cream-coloured; uncrackled, transparent and glossy. The base is entirely covered with glaze.

Body: fine white porcelain easily transmitting an orange-coloured light. It is resonant but not to the same degree as many T'ang bowls.

The base is low but not quite corresponding to the northern Ting foot. The inside of the foot-rim is spreading.

Early Ting-yao?

D. 165 mm. H. 50 mm. G. L.

Plate 67.

62.

Large shallow bowl with rounded sides and rolled mouth-rim, which is unglazed.

Glaze: fine, ivory-white Ting glaze transparent and uncrackled, covering the whole bowl except the margin of the mouth-rim.

Body: fine white porcelain with reddish translucency. On the inside, a splendid and artistically carved design of a three-clawed dragon pursuing a pearl.

Base in every respect corresponding to Koyama's shards.

Ting-yao (Chien-tz'u-ts'un ware).

D. 300 mm. C. K. 405.

Plates 68 and 69.

63.

Large, deep basin with rounded sides covered with a cream-coloured, thin, uncrackled and translucent, slightly greyish Ting glaze, which on the outside runs into numerous gummy tear-drops, the position of which seems to indicate baking in an upright position. The mouth-rim is free from glaze and bound with copper. The inside is boldly carved with a design of a big archaic-looking fish and water plants among waves.

Body: fine white porcelain with an orange translucency.

The base-rim is very low and forms a narrow ring tallying exactly with the Ting-yao shards from Chien-tz'u-ts'un. The ring is flat beneath and shows some irregularities due to grit in the sagger; for the rest, the base is glazed.

Ting-yao (Chien-tz'u-ts'un ware).

D. 280 mm. C. K. 396.

Plates 70 and 71.

64.

Dish of a shallow bowl shape, with concave sides.

Ivory-white glaze of Ting-type covers the entire specimen except the mouth-rim, which is bound with copper.

On the inside, a very artistically carved and combed design of two mandarin ducks among lotus and waves.

Body: fine white porcelain with reddish-coloured translucency.

Base-rim very low and of a typical northern shape.

Ting-yao, probably from Chien-tz'u-ts'un, Sung.

An almost exactly corresponding dish is to be found in the David Catalogue, Pl. 89. A simpler specimen with the same decorative elements in Hobson-Hetherington, Art of the Chinese Potter, Pl. 47.

Exhibited Copenhagen 1950. Formerly in the Howard Back collection.

D. 210 mm. C. K. 400.

Plates 72 and 73.

64 A.

Miniature jar of globular shape. Cream-tinted transparent and uncrackled glaze, thinly applied.

Body: white porcelain with an incised trellis-work on the belly and two carved lines around the mouth-rim. Orange-coloured translucency.

Low domed cover with knob in the form of a stalk.

Foot-rim low and lacking any peculiar characteristics.

Exhibited Nationalmuseum Stockholm 1949.

Ting-type, Sung.

H. 67 mm. C. K. 372.

Plate 73.

65.

Shallow bowl with six indentations in the mouth-rim and rounded sides.

Glaze: cream-white Ting glaze of high quality. Mouth-rim free from glaze and bound with copper.

Body: fine white porcelain. The inside covered with a rich design of lotus and peony-flowers and foliage, carved and combed.

Base in accordance with the Koyama shards, glazed and horizontal beneath.

Ting-yao (Chien-tz'u-ts'un ware).

D. 225 mm. C. K. 402.

Plates 74 and 75.

66.

Shallow bowl with rounded sides. The mouth-rim has five indentations and a slight suggestion of lobe divisions.

Glaze: cream-coloured, translucent and uncrackled, leaving the mouth-rim free and covering the whole base. The rim bound with copper.

Body: fine white Ting porcelain, on the inside a sketchy design of lotus flowers and leaves.

Base of Ting-yao type, in accordance with the Koyama shards.

Ting-yao (Chien-tz'u-ts'un ware).

D. 256 mm. C. K. 401.

Plates 75, 76 and 81.

67.

Deep basin with rounded sides and rolled-out mouth-rim.

Fine, ivory-white glaze covering the base but leaving the mouth-rim free. The latter bound with copper.

Body: fine white porcelain with a reddish translucency. Both sides of the bowl have carved design of lotus and arabesque.

The foot-rim is very low, entirely glazed and with a horizontal bottom surface within it. It thus tallies with Koyama's shards.

Ting-yao (Chien-tz'u-ts'un ware).

D. 170 mm. C. K. 397.

Plates 77 and 78.

68.

Large dish with low rounded sides.

A soft-looking, cream-coloured Ting glaze covers the whole dish in a thin layer except the mouth-rim, which is mounted with its original brass band.

Body: fine white Ting porcelain, transmitting a reddish light. The inside is covered with a rich moulded design of flowers and leaves.

The base is very low, flat and glazed beneath and formed into a narrow ring, with a diameter of 80 mm.

It accords with the Koyama shards.

Ting-yao, Sung (probably Chien-tz'u-ts'un ware).

D. 300 mm. G. L.

Plate 79.

69.

Saucer with steep sides and flat base, without foot-rim.

Fine Ting glaze of cream-colour, transparent and uncracked.

Body: fine white porcelain. On the inside, a very sensitively carved design of a lotusflower.

Probably Ting-yao.

D. 130 mm. H. 20 mm. C. K. 416.

Plates 80 and 81.

70.

Saucer with flat bottom and short rounded sides. The specimen has been baked bottom up, as is indicated by the flow of the glaze, which leaves the mouth-rim bare. The glaze corresponds with that on the shard to the right, an A shard of Koyama's, from a saucer of exactly the same size and shape. On the inside a carved lotus design.

Body: fine white porcelain with an orange translucency.

There is no foot-rim, but the flat bottom is trimmed to a slightly higher level, and so is the rim between the base surface and the sides.

Ting-yao from Chien-tz'u-ts'un.

D. 100 mm. G. L.

Plate 82.

71.

Miniature jar in the shape of a rice measure or a Yü-lo p'ing (vase shaped like a plaited willow fish-basket). Very carefully and artistically potted to imitate basket work. Neck short and spreading, with two circular loop-handles at its base.

Glaze very thin, transparent and uncrackled and, where running thick, of a faint cream or wax colour.

No foot-rim, the base glazed.

Body: fine white Ting porcelain, easily transmitting light.

This specimen is of an outstanding quality.

A similar vessel in the Chinese Catalogue of the London Exhibition 1935—36, Vol. 2, Porcelain No. 3, one of the few pieces that the Chinese authors regard as Sung Ting ware.

D. 60 mm. H. 82 mm. C. K. 430.

Plate 83.

72.

Figure of a standing crane with rockery and prunus. A very delicate, cream-coloured, transparent and entirely uncrackled glaze covers the figure, which is very sensitively modelled in a pure white porcelain with an orange translucency in its thinner parts.

This most exquisite specimen compares well both in regard to the glaze and to the body material with the best Ting-yao specimens reproduced here.

H. 80 mm. C. K. 363.

Plate 83.

73.

Shallow bowl with six-foiled rim and six raised ribs on the inside, partitioning the sides into six panels. Rim bound with copper.

Glaze very fine, ivory-white, covering the bowl except the mouth-rim and parts of the base.

Body: fine white porcelain, transmitting an orange-coloured light. The panels on the sides have a carved and combed design, showing alternately mandarin ducks on combed waves (three panels) and lotus flowers (three panels).

Body: fine white porcelain.

Base-rim fairly high and spreading on the inside. Differing from the Ting-yao foot as it appears on the shards.

Ting type, Sung Chi-chou ware?

D. 200 mm. C. K. 398.

Plates 84 and 85.

74.

Bowl with rounded sides, covered with a cream-coloured thin and transparent glaze of Ting type.

The outside carved or moulded with a pattern of overlapping petals of lotus, the centre of the inside having an incised design of dragons in clouds.

Body: white porcelain, translucent.

Base fairly high and straight, with a deep recess like a Chekiang celadon foot, the rim being unglazed beneath. No correspondence with the northern Ting-yao foot.

Sung Chi-chou ware?

D. 170 mm. C. K. 395.

Plate 86.

75.

Bowl with straight sides, rounded downwards, and with a low, domed cover.

Glaze ivory-white, mouth-rim and base-rim being left unglazed.

Body: white, slightly greyish porcelain, translucent. The outside has an engraved lotus-petal pattern, the cover has slantingly radiating lines.

Base-rim narrow, with deep recess, and glazed, flat bottom surface.

Sung Chi-chou ware?

D. 127 mm. C. K. 376.

Plate 87.

76.

Deep bowl with six-lobed rim and sides. Glaze of a very warm deep cream-colour, of high quality, transparent and uncrackled. Mouth-rim unglazed, except in the indentations. Tear-drops on the outside. Base-rim glazed.

Body: very fine white porcelain, translucent with an orange-coloured light.

Base high, vertical outside and spreading inside, resulting in a fairly sharp margin at the bottom.

This specimen cannot be northern.

Sung Chi-chou ware?

D. 120 mm. H. 90 mm. G. L.

Plate 88.

77.

Deep bowl of plain form but of very high quality. Glaze ivory-coloured, evenly distributed, transparent and uncrackled, with egg-shell pitted surface. The mouth-rim and adjacent part of the inside are made free from glaze, as is also the inside of the base-rim.

Body: fine white Sung porcelain, resonant and transmitting an orange-coloured light.

Base fairly high with vertical outside and spreading inside.

Sung Chi-chou ware?

D. 130 mm. H. 100 mm. G. L.

Plate 89.

78.

Bowl with rounded sides, fairly deep. Mouth-rim bound with copper.

Glaze of a warm cream-colour, of high quality.

Body: fine white porcelain of Ting type. The inside has a very rich moulded design of peony scrolls and three boys in their midst. In the centre a design of waves resembling early Ming blue-and-white patterns.

The base is not of Ting-yao type. It is higher and spreading on the inside.

Late Sung white porcelain, Chi-chou ware?

D. 206 mm. C. K. 423.

Plate 90.

79.

Dish of shallow bowl shape, with narrow projecting rim and rounded sides gad-rooned on the outside.

Glaze thin and cream-coloured, transparent, stopping at some distance from the base, thus leaving the base-rim and adjacent parts of the lower outside free from glaze, as on a T'ang specimen.

In the middle of the inside a moulded design of flowers and leaves.

Base unglazed and with a deep, dome-shaped recess.

Sung white porcelain, Chi-chou ware?

D. 133 mm. C. K. 425.

Plate 91.

80.

Deep bowl with slightly thickened mouth-rim and covered with a beautiful, soft-looking, transparent, uncrackled, cream-coloured glaze.

Body: fine white porcelain with an orange-coloured translucency. The inside covered with a very rich and beautiful floral design, moulded in high relief.

The base is relatively high, with a dome-shaped recess and only partly glazed.

Sung white porcelain, Chi-chou ware?

D. 138 mm. C. K. 171.

Plate 92.

81.

Saucer with steep, horizontally fluted sides and large flat base. Mouth-rim bound with metal.

Cream-coloured, transparent and uncrackled glaze.

Body: fine white porcelain with an orange-coloured translucency. On the inside, a somewhat carelessly carved and combed design of a lotus-branch.

The base is free from glaze on the under side, which seems to have been ground off with some tool. It does not agree with the shards of Koyama and other pieces similar to them.

Southern porcelain ware. Sung?

D. 227 mm. C. K. 399.

Plates 93 and 94.

82.

Small plate of octagonal form and with flat base.

Glaze of Ting type.

Body: fine white porcelain. On the inside, a carved design of lotus flowers, made in the same manner as the design on the specimen 83 below.

Flat base-rim, very narrow and trimmed free from glaze.

Sung white porcelain of a southern type. Earlier in the Winkworth collection.

D. 114 mm. C. K. 406.

Plate 95.

83.

Large dish with flat base, rounded sides and a narrow, flat rim, which has a raised, metal-bound edge.

Fine cream-coloured glaze, transparent and uncrackled.

Body: fine white porcelain. On the inside a deeply carved, rich design of peony scrolls and arabesque.

Base flat, base-rim very low and narrow, flat beneath and ground free from glaze with some tool. The base thus has the appearance of a later porcelain dish.

Sung porcelain of a southern type.

D. 265 mm. C. K. 403.

Plates 96 and 97.

84.

Brush-bath, circular, with low, steep sides, flat base-rim and unglazed mouth-rim. Placed upside down when baked.

A most beautiful specimen, with a warm cream-coloured glaze, only the flat top of the mouth-rim being left free from glaze.

Body: fine white porcelain, easily transmitting an orange-coloured light. The inside has a very rich design, moulded with two peacocks in the centre, surrounded by cloud-scrolls. The sides have a rich design of lotus flowers and leaves, somewhat overloaded.

There is no base-rim, but the base is slightly pressed in, thus producing a slight elevation of the centre of the inside bottom surface.

White porcelain, Sung-Yüan.

D. 205 mm. C. K. 422.

Plates 97 and 98.

85.

Tall bottle-shaped vase, beautifully turned, with ovoid body, tall, slightly concave neck and spreading, disc-shaped mouth.

Glaze of Ting type, cream-coloured, slightly greyish, transparent and uncrackled, ending on the outside of the base.

Body: white porcelain, translucent.

Base-rim and bottom surface within it unglazed. The base-rim is very roughly turned, bevelled, its inside spreading. Some circular concentric striations inside the foot.

Ting type, the foot indicating an early date.

Sung white porcelain. Exhibited National Museum Stockholm 1949.

H. 258 mm. C. K. 375.

Plates 99 and 100.

86.

Jar of globular shape with short, horizontally grooved neck and two horizontal furrows around the shoulder.

Cream-coloured, transparent and uncrackled glaze of Ting type, covering the whole vessel except the under surface of the base.

Body: fine white porcelain with orange-coloured translucency.

Foot-rim spreading both outside and inside, very roughly trimmed and bevelled.

Ting type, the foot-rim indicating an early date.

Sung white porcelain. Exhibited National Museum Stockholm 1949.

H. 130 mm. C. K. 374.

Plates 100 and 101.

87.

Stem-cup with tall, hollow stem, bevelled at the outer edge. Mouth-rim bound with metal.

Glaze carefully applied, translucent, uncrackled, cream-coloured, of Ting type.

Body: fine white porcelain, transmitting an orange-coloured light. The plain potting and the very high quality of the glaze and the body seem to justify our determining it as Ting-yao.

Formerly in the Diedrich Abbes Coll.

H. 100 mm. C. K. 378.

Plate 102.

88.

Deep bowl with straight sides rounded at the bottom. Flat base without rim and unglazed.

Glaze cream-coloured and transparent, uncrackled.

Body: fine white porcelain, translucent with an orange-coloured light. On the outside three characters are incised: shang yüeh chü (office for superior medicine). Mouth-rim unglazed and bound with copper.

White (Sung?) porcelain.

D. 83 mm. H. 45 mm. C. K. 393.

Plate 103.

89.

Small box with cover.

Smooth thick glaze, uncrackled and transparent.

Body: fine white porcelain, translucent with an orange-coloured light.

Ting-yao.

D. 67 mm. C. K. 380.

Plate 104.

89 A.

Small bowl-shaped cup with stand attached; the stand has six indentations in the rim.

White, ivory-coloured glaze. Body: white porcelain.

Sung white porcelain.

H. 41 mm. C. K. 381.

Plate 104.

90.

Pair of bowls with rounded sides, metal-bound mouth-rims and low bases.

Glaze cream-coloured, thin and uncrackled.

Body: fine white porcelain. On the inside, carved designs of lotus and arabesque.

Base-rims very low and glazed, with some sagger-grit.

Ting-yao (Chien-tz'u-ts'un ware).

D. 90 mm. C. K. 394.

Plates 105 and 106.

91.

Small jar of depressed globular form and with cover; a specimen of great artistic merit.

Smooth fine glaze of a white, slightly greenish-grey colour. It covers the entire vessel including the flat base.

Body: fine white porcelain with slightly whirl-shaped radiating lines around the upper part.

Sung white porcelain.

D. 80 mm. H. 60 mm. C. K. 182.

Plate 106.

92.

Pair of dishes with flat bottom without foot-rim and with the mouth-rim divided into six lobes by shallow indentations.

Glaze cream-white, uncrackled and transparent, covering the whole, including the underneath surface, only the mouth-rim being free from glaze. To judge from the flow of the glaze, the dishes have been fired bottom up.

Body: white porcelain.

Ting-yao.

D. 155 mm. C. K. 382.

Plate 107.

93.

Pair of small dishes with six-foil mouth-rims, the latter being unglazed and bound with metal.

Fine cream-coloured glaze, smooth and uncrackled, transparent.

Body: fine white porcelain. Bases flat and without foot-rims.

Sung white porcelain. Ting-yao?

D. 97 mm. C. K. 387.

Plate 108.

94.

Small box and cover of square shape. Porcelain of fine quality covered with a cream-coloured Ting-type glaze. On the cover a moulded design of radiating foliage, a pattern occurring on silver objects.

The bottom is unglazed.

Sung white porcelain.

D. 65 mm. C. K. 426.

Plate 109.

95.

Pair of saucers. Horizontally everted rim with six indentations from beneath and the rounded sides gadrooned into six panels.

Glaze fine, smooth, transparent, colourless, with a tinge of green.

Body: white porcelain, translucent.

Sung white porcelain. Ting type.

D. 110 mm. H. 25 mm. C. K. 173.

Plate 110.

96.

Small jar and cover, with rounded sides and a carved pattern of lotus petals.

Greyish-white glaze with a tinge of green, ending at the foot.

Body: white porcelain, highly translucent.

Base unglazed.

Sung white porcelain.

D. 95 mm. H. 100 mm. C. K. 141.

Plate 111.

97.

Deep flower-shaped bowl with six indentations in the mouth-rim and gadrooned into six panels.

Glaze pure white, cold, ending on the outside of the base-rim.

Body: fine white porcelain transmitting a white light.

Base of T'ang type.

Sung white porcelain. Early type.

D. 90 mm. H. 50 mm. C. K. 172.

Plate 111.

98.

Small water-pot with globular body and small mouth, cut down and fitted with a metal band. On the shoulder three bands in basket-work pattern separated by three studs in the same pattern, and probably applied in the same way as the bands.

Glaze cream-coloured, of Ting type.

Body: fine white porcelain.

Sung white porcelain.

H. 48 mm. C. K. 371.

Plate 112.

99.

Small water-pot with barrel-shaped body and contracted mouth with low neck.

On the shoulder there are four flower-shaped studs from which four basket-work bands run down the sides.

Glaze cream-coloured, smooth and uncracked.

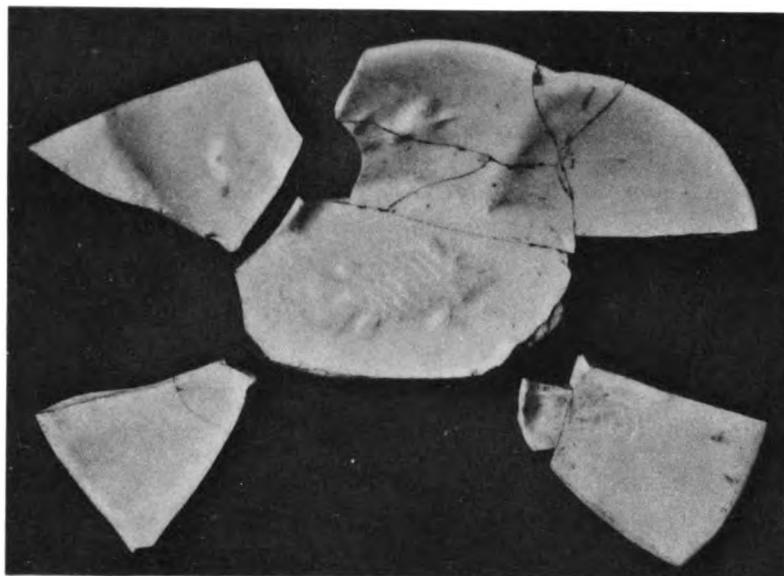
Body: fine white porcelain, translucent.

For a similar type cf. Eumorfopoulos Catalogue, Vol. 3, Pl. 24, C 117.

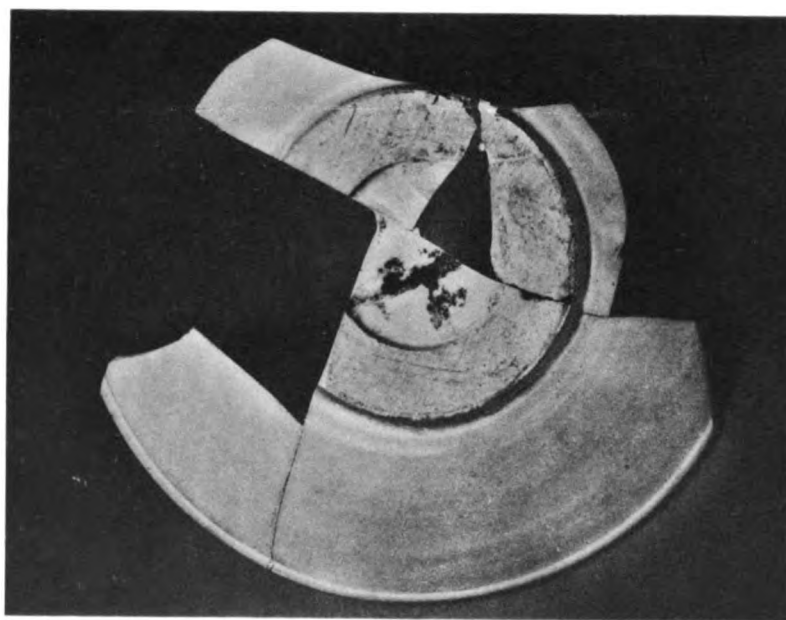
Sung white porcelain.

H. 40 mm. C. K. 437.

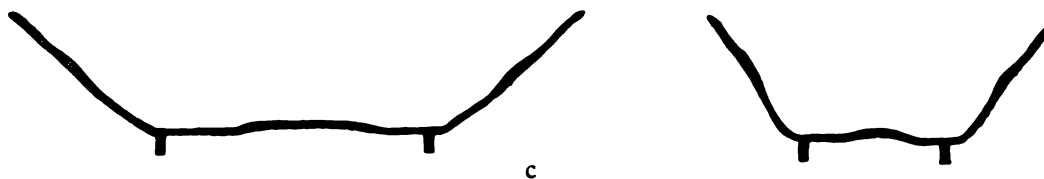
Plate 112.



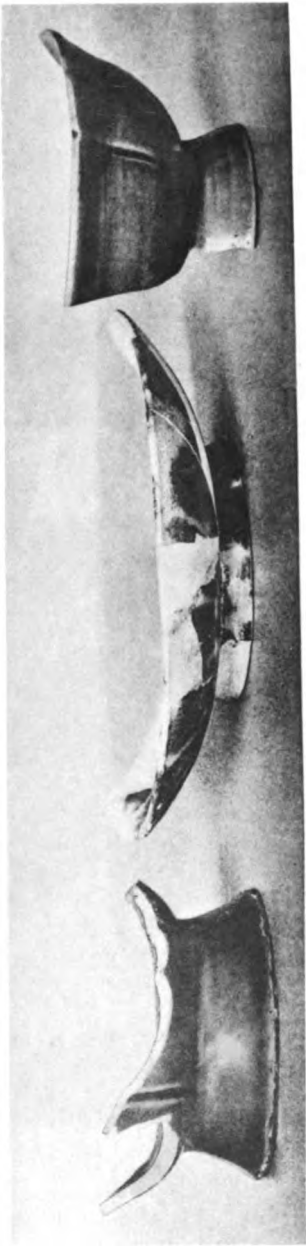
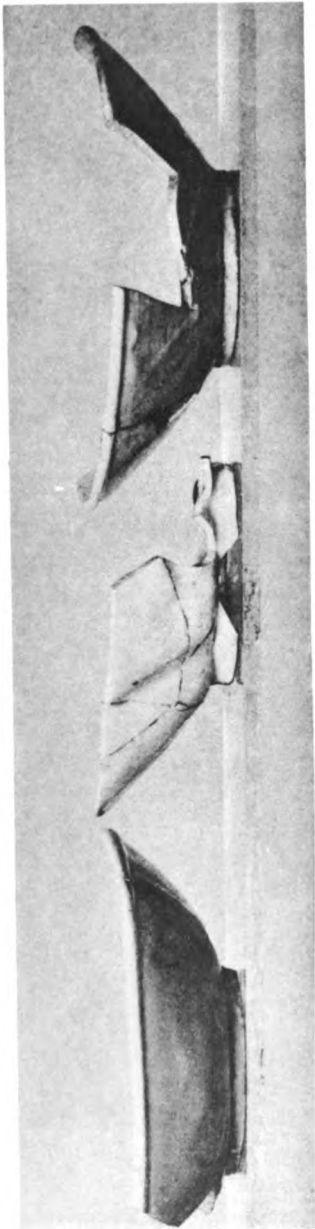
a



b



c





a



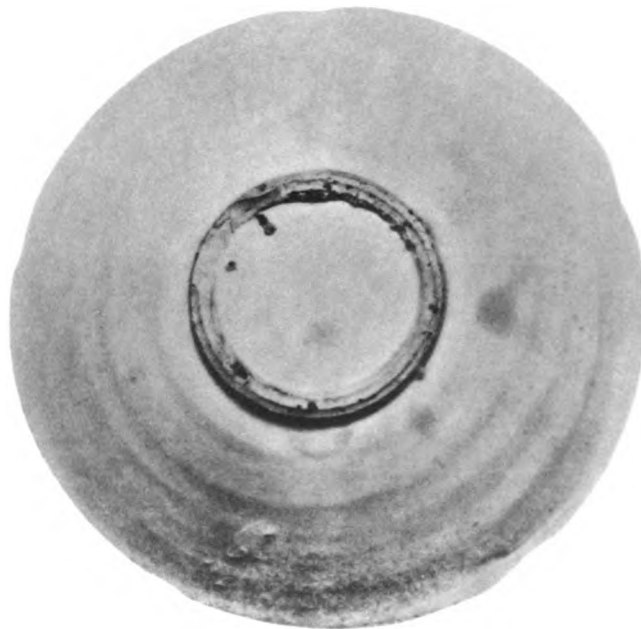
b



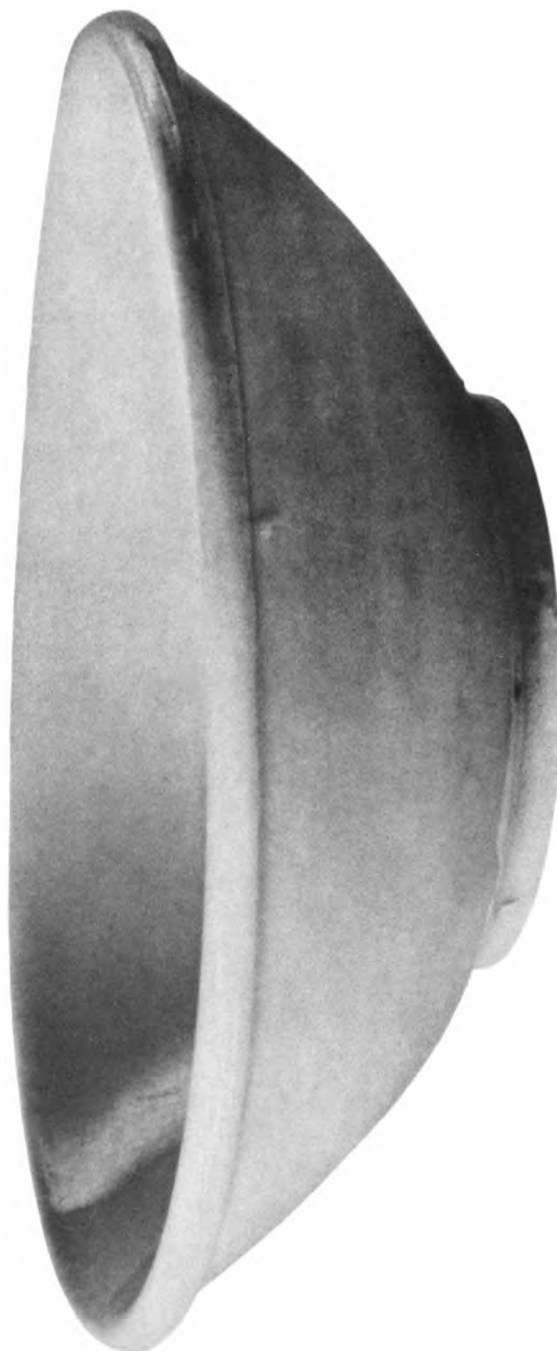
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a

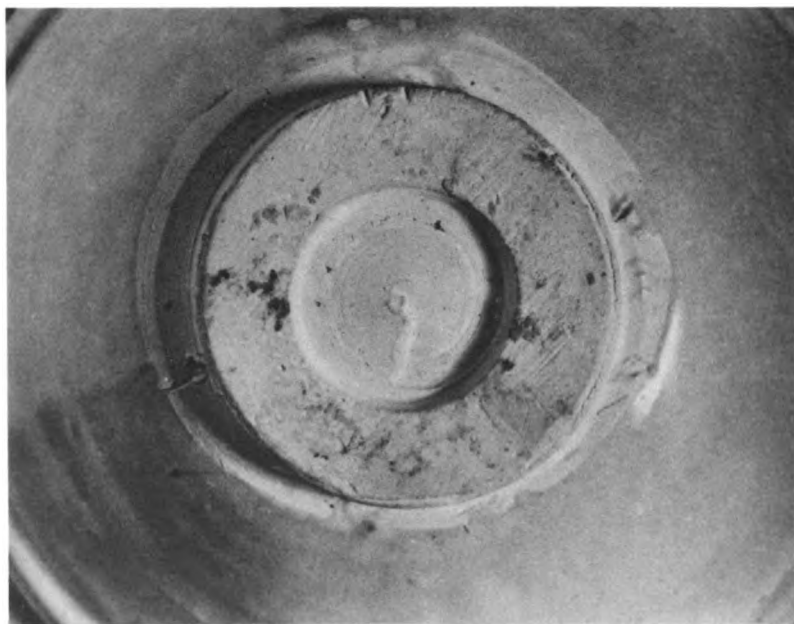


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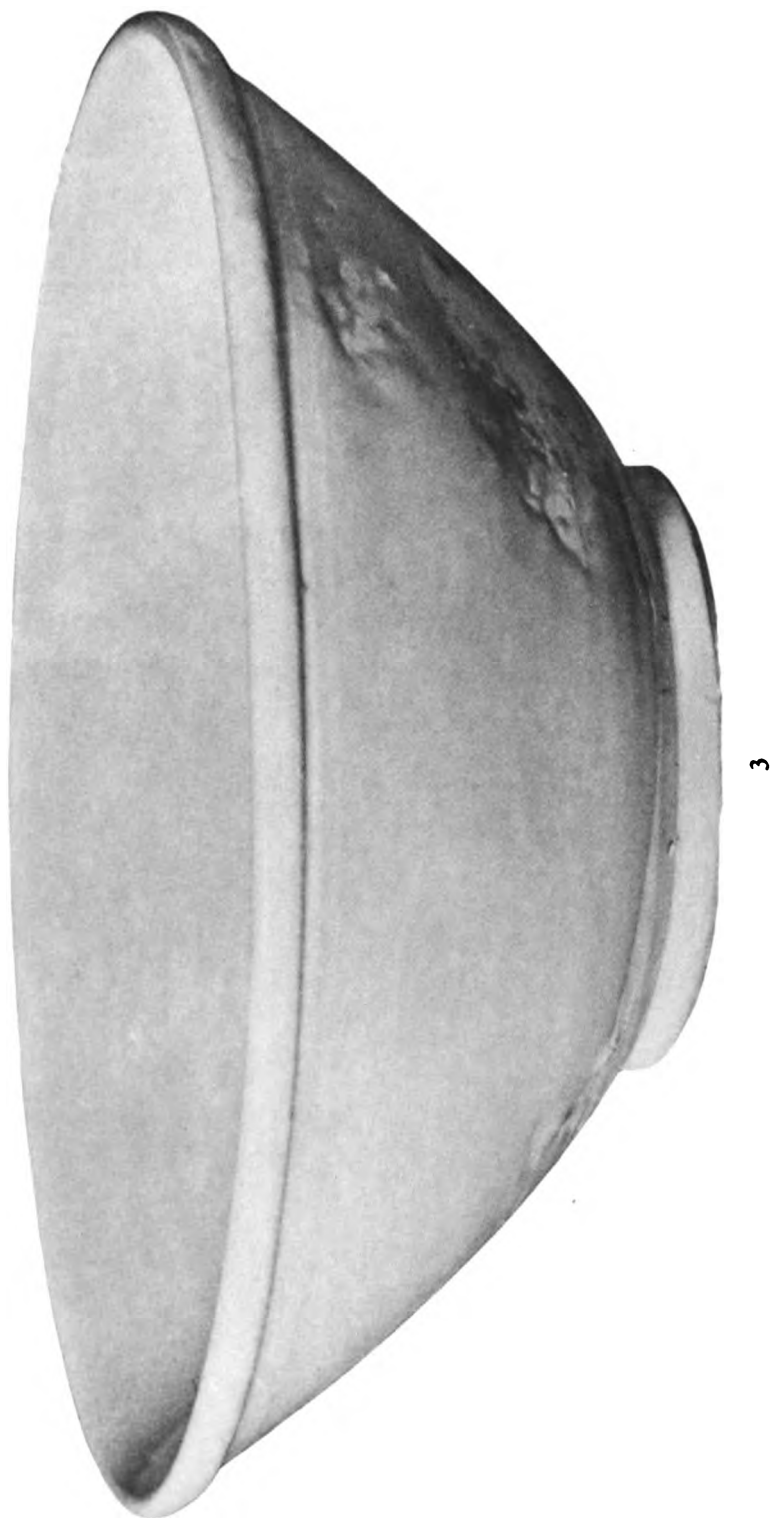




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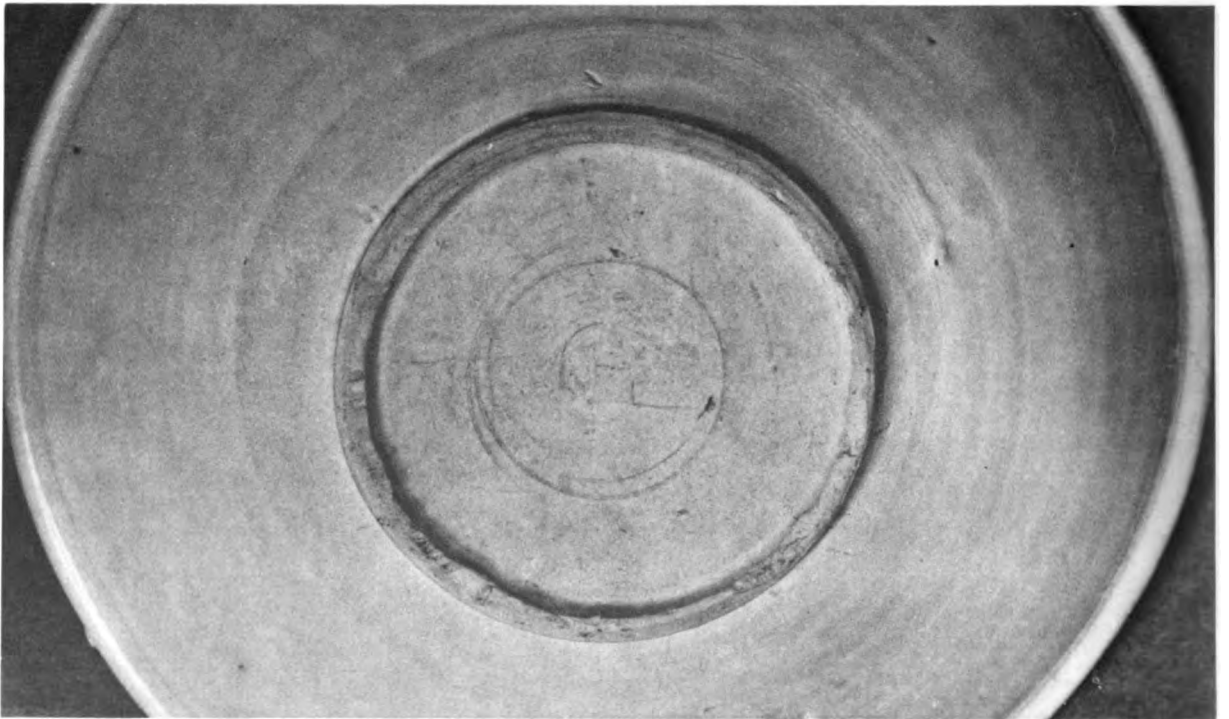


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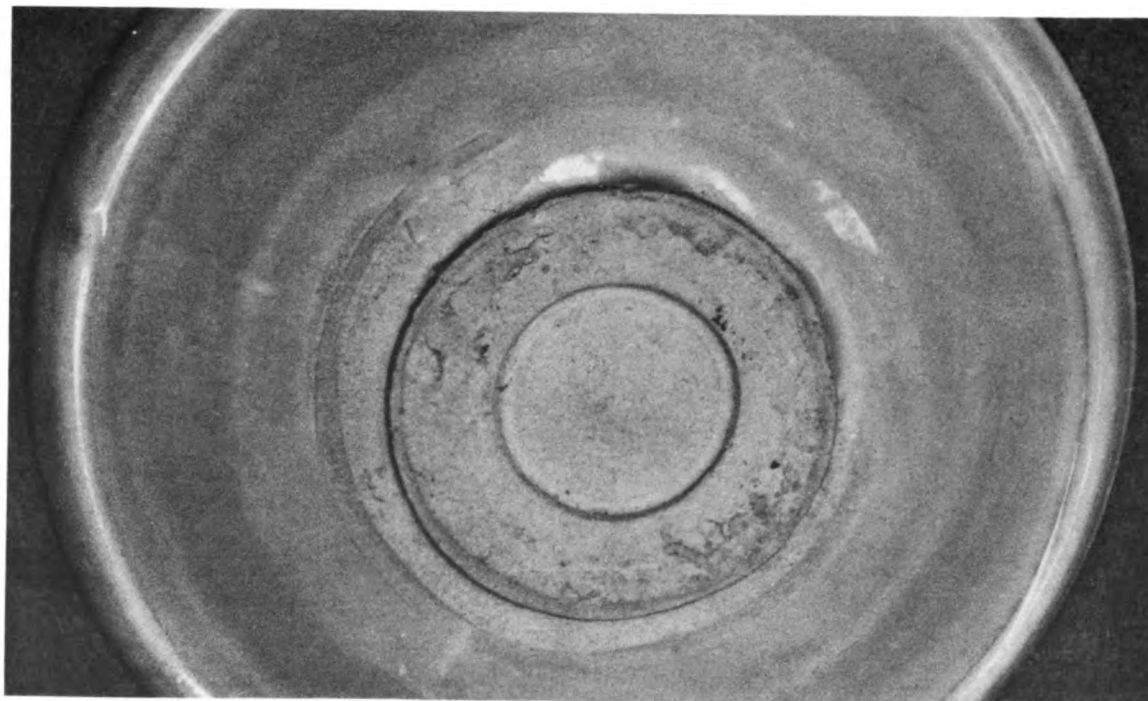
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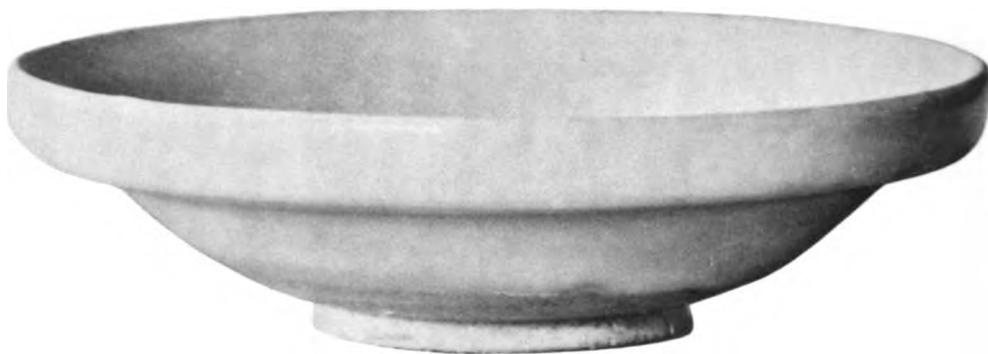
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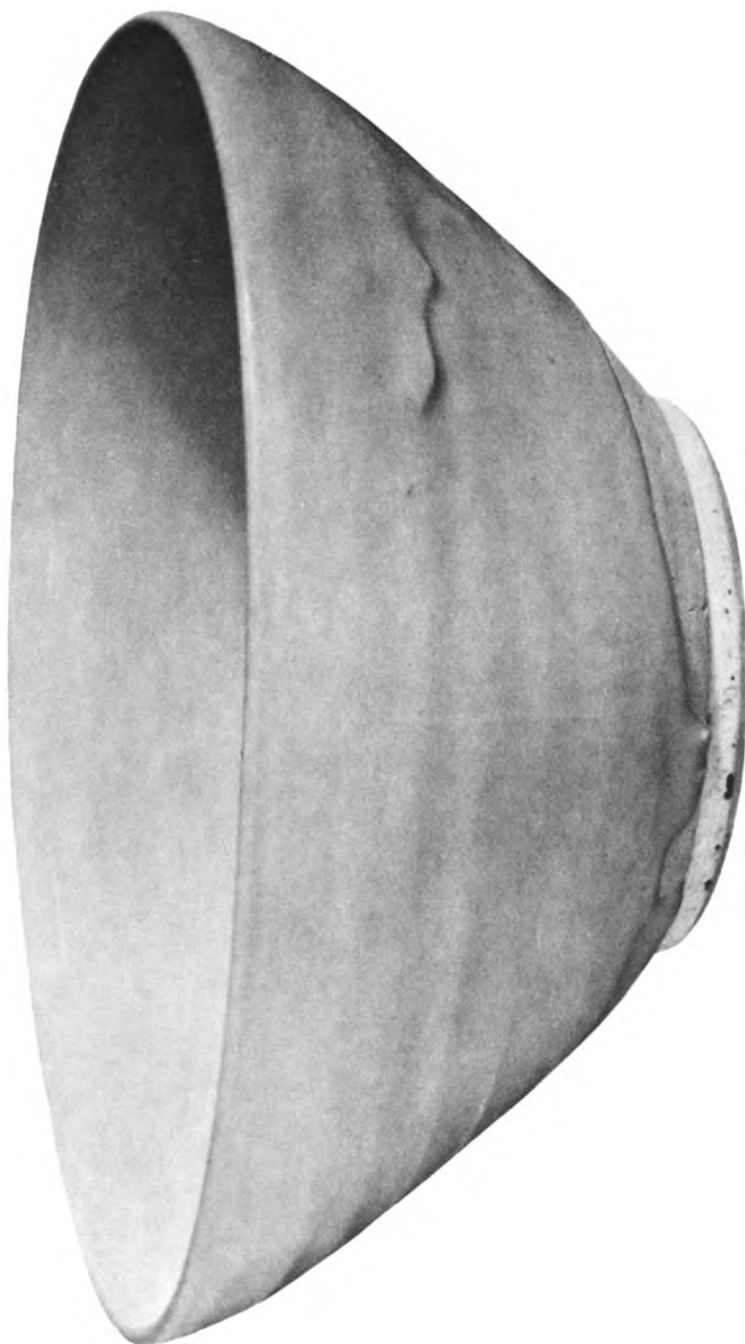
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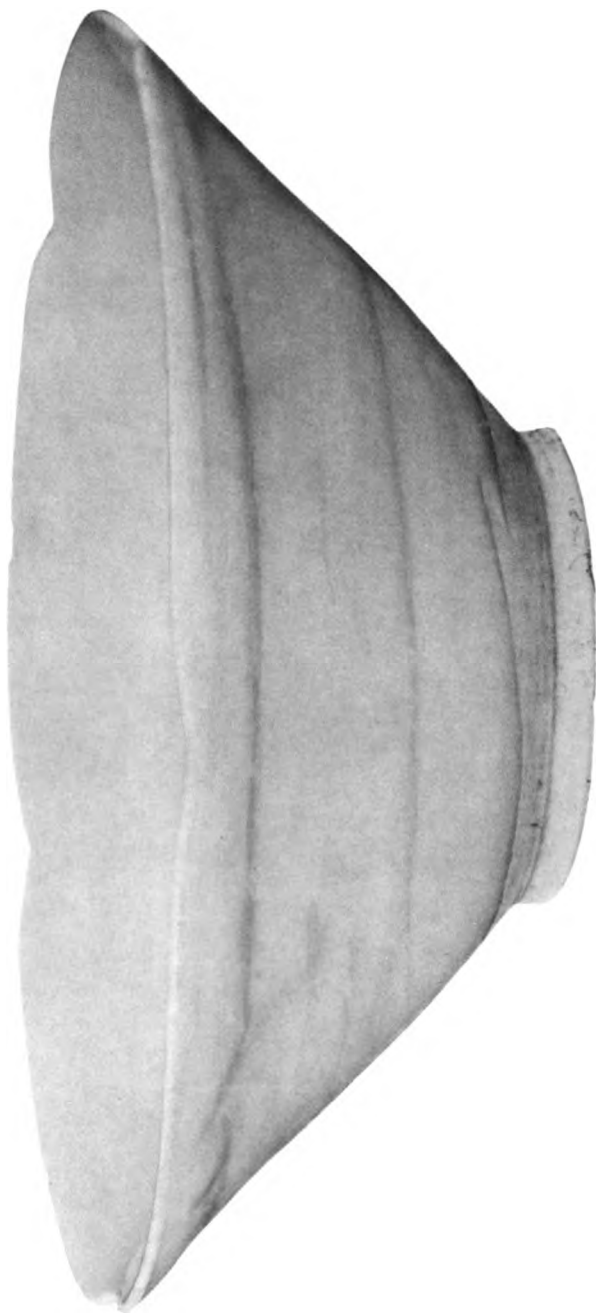
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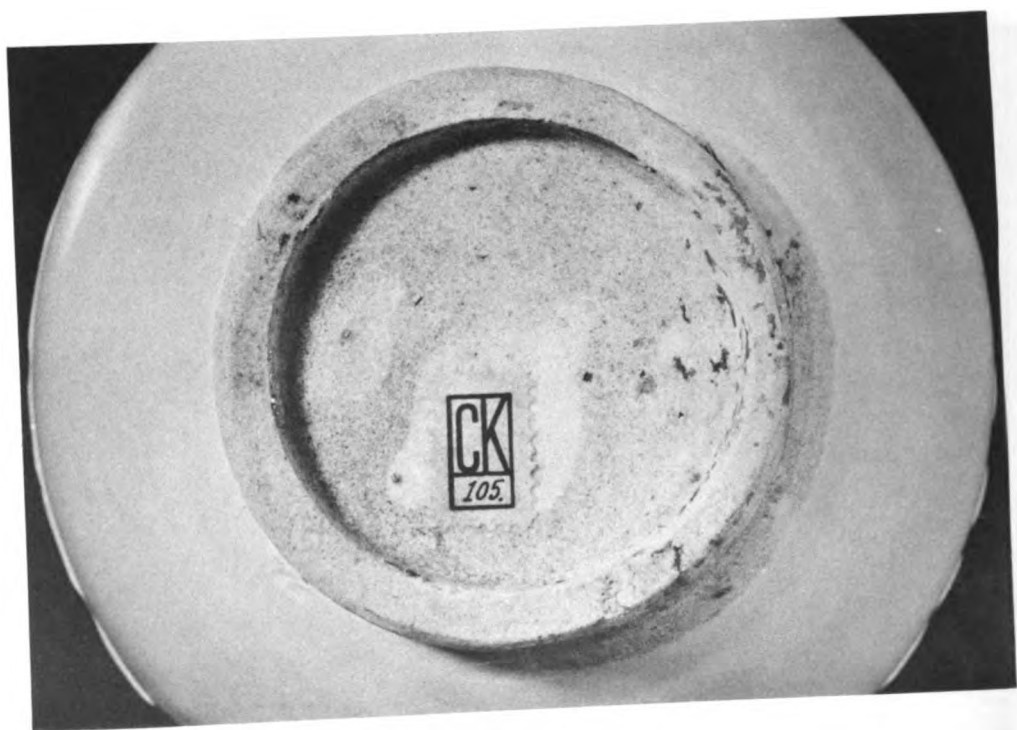
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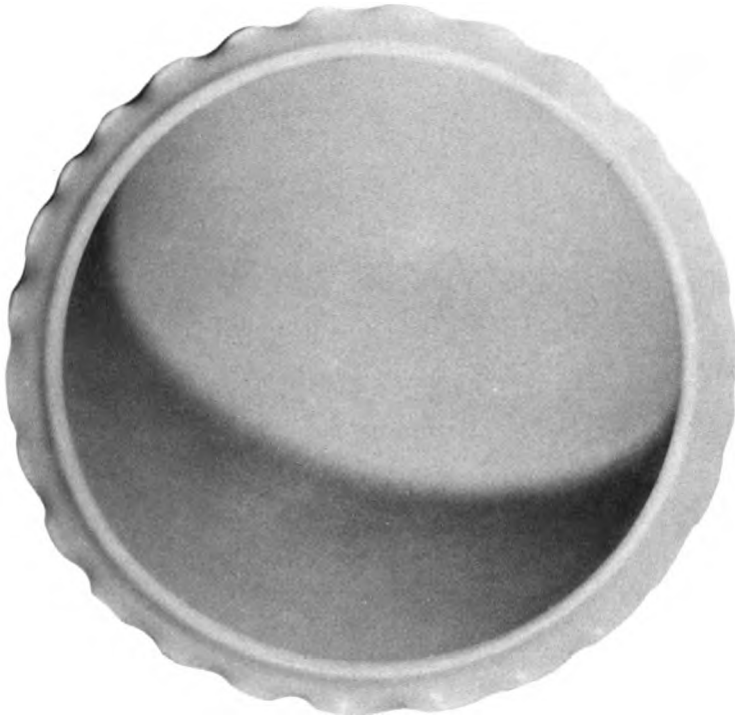
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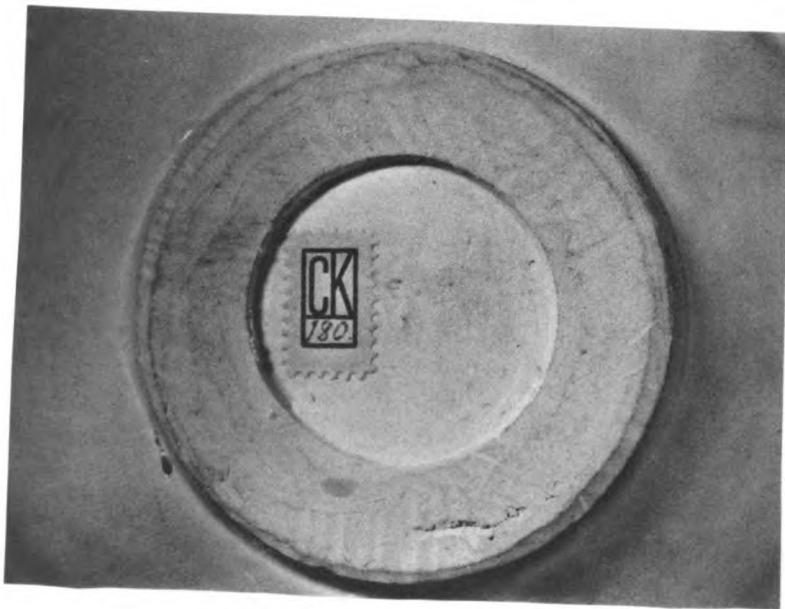
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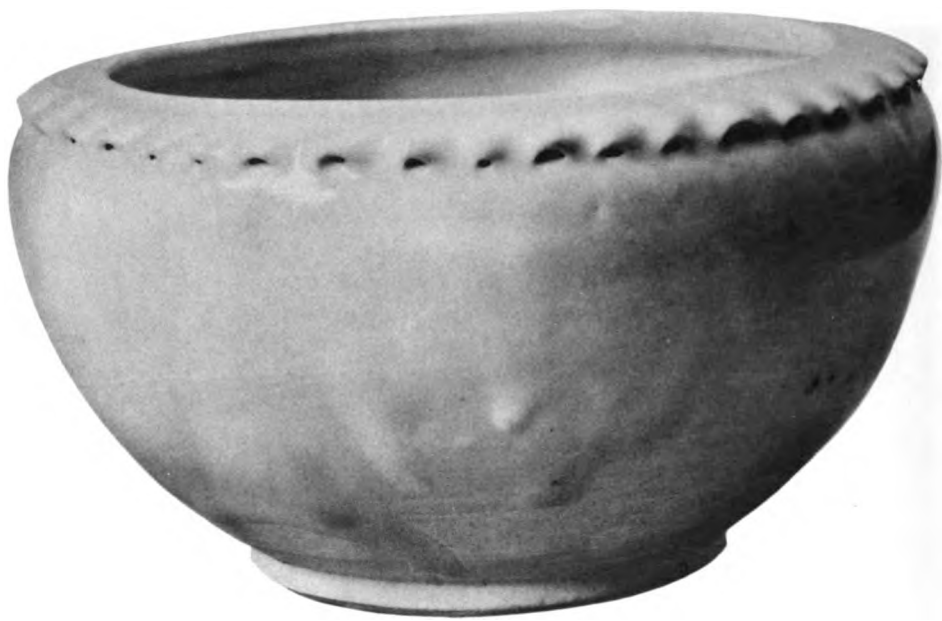
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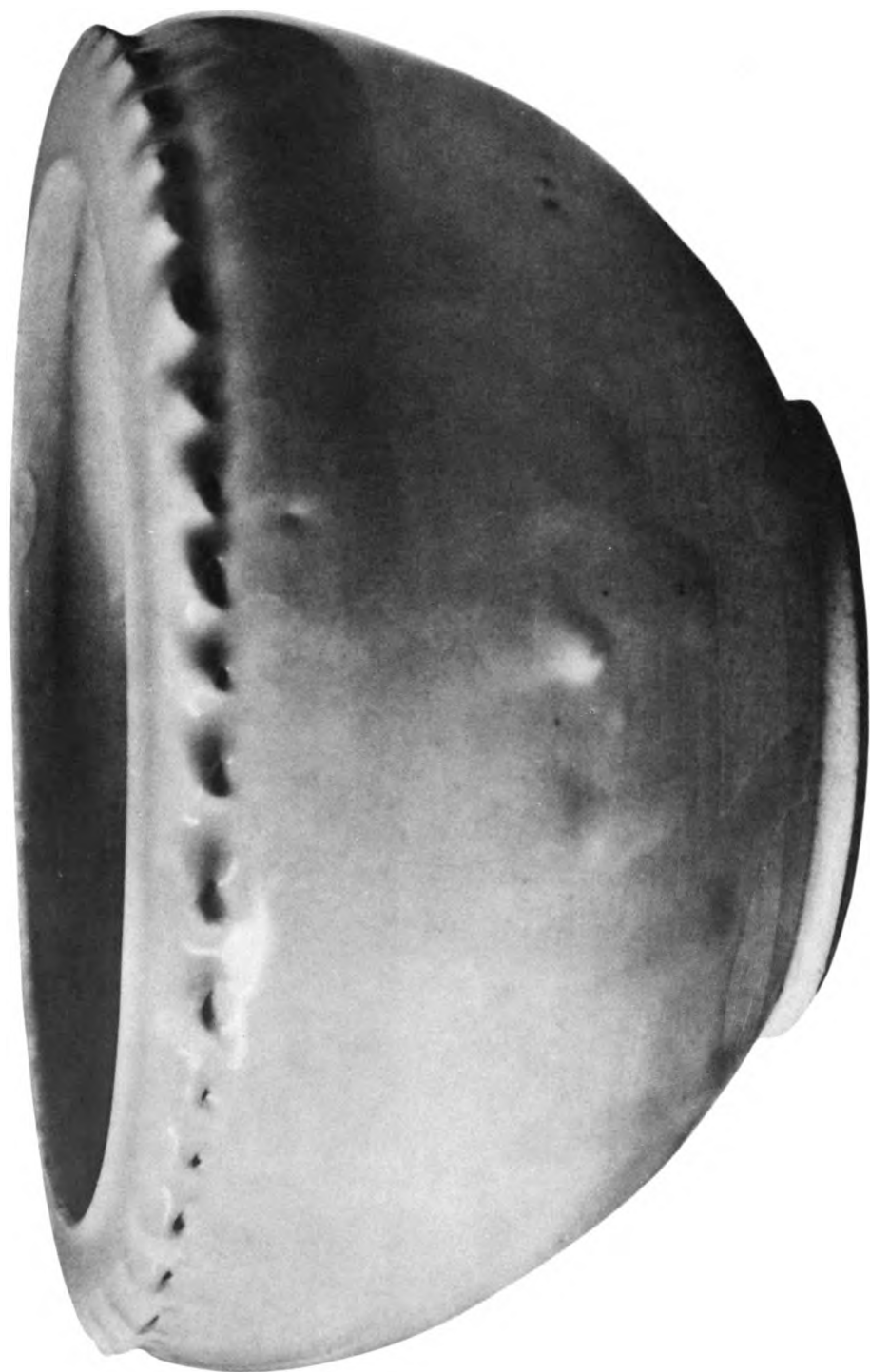
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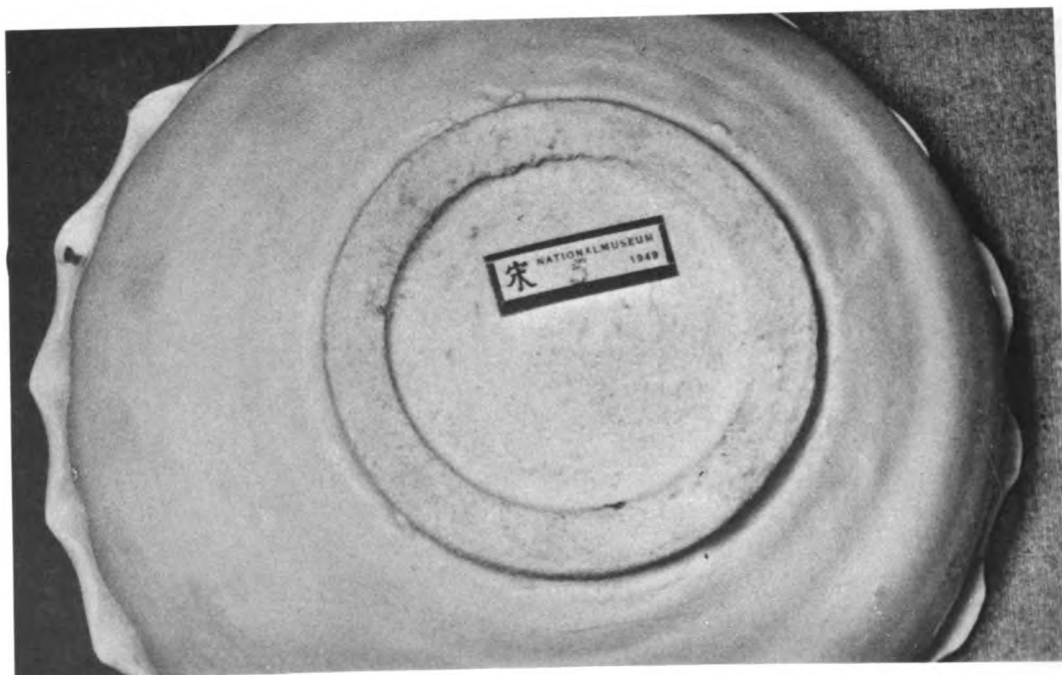
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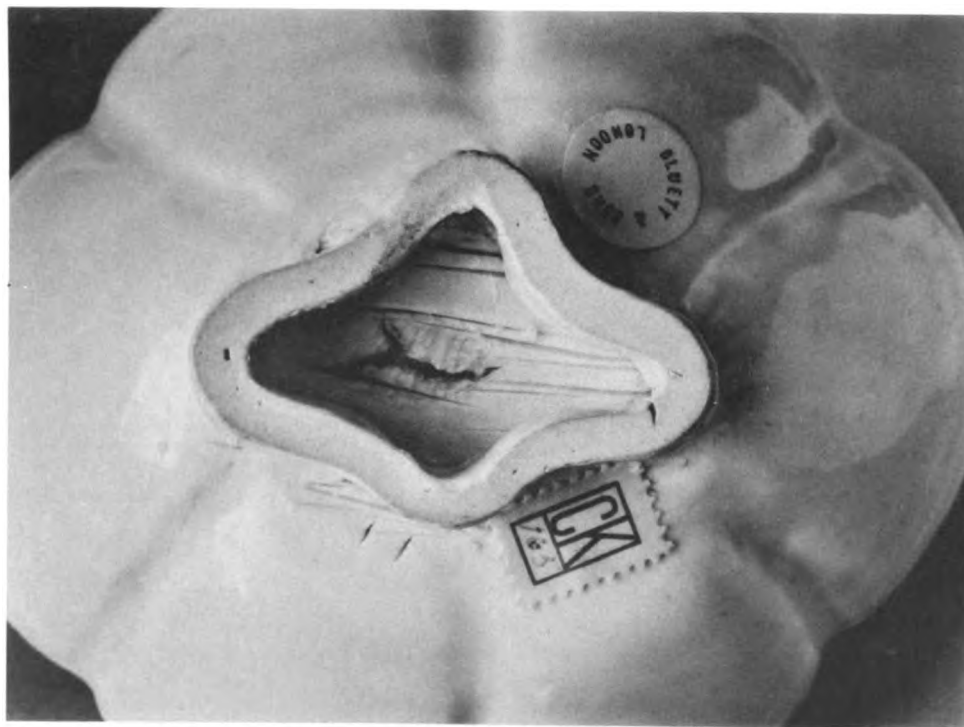
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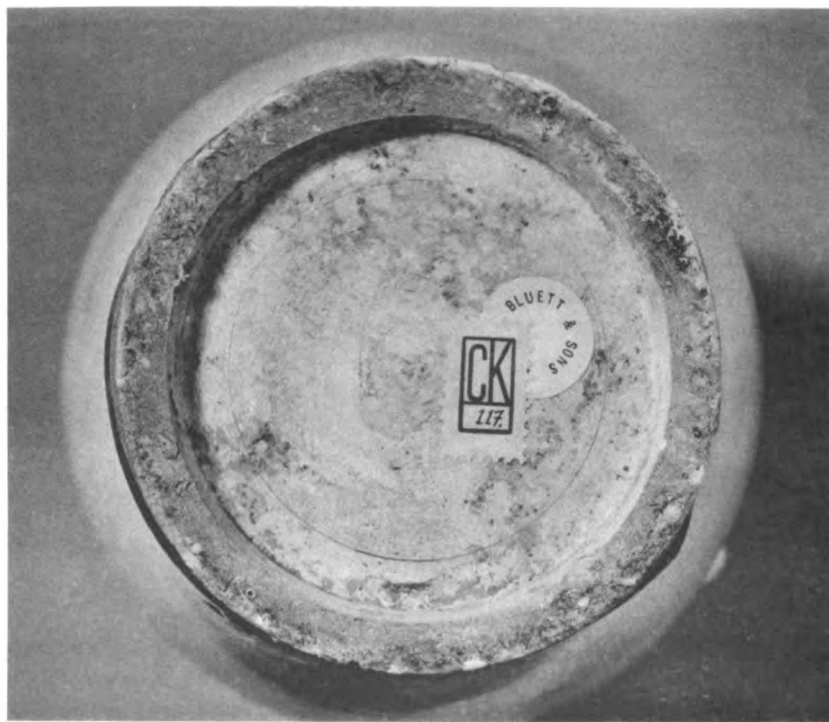
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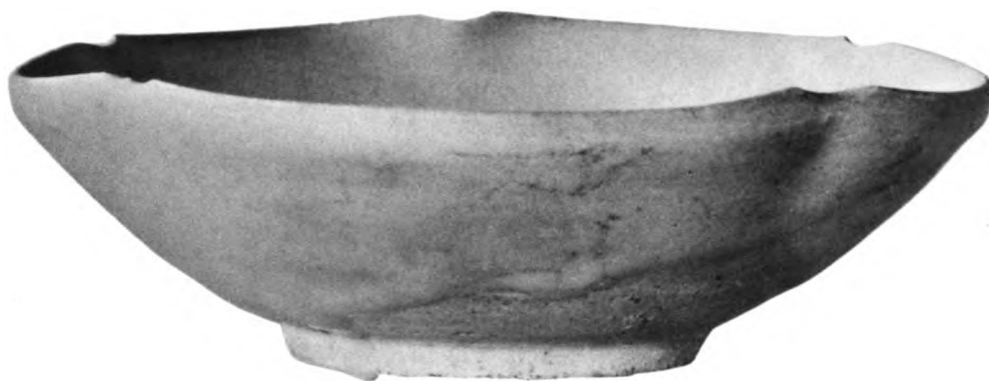
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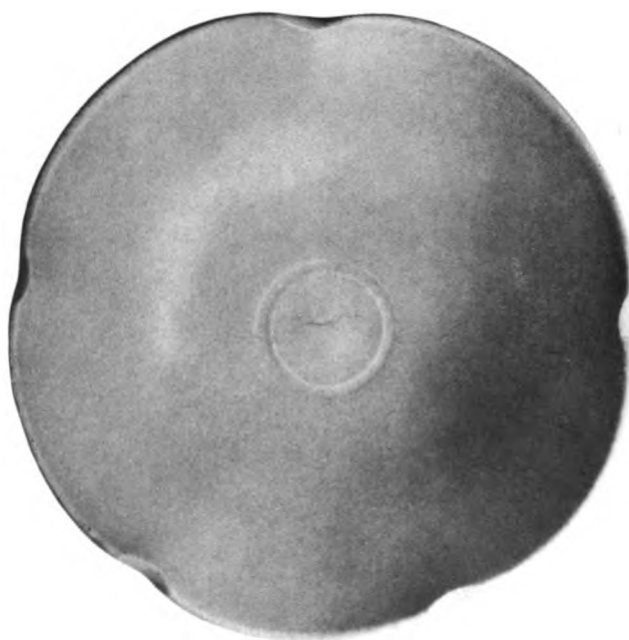
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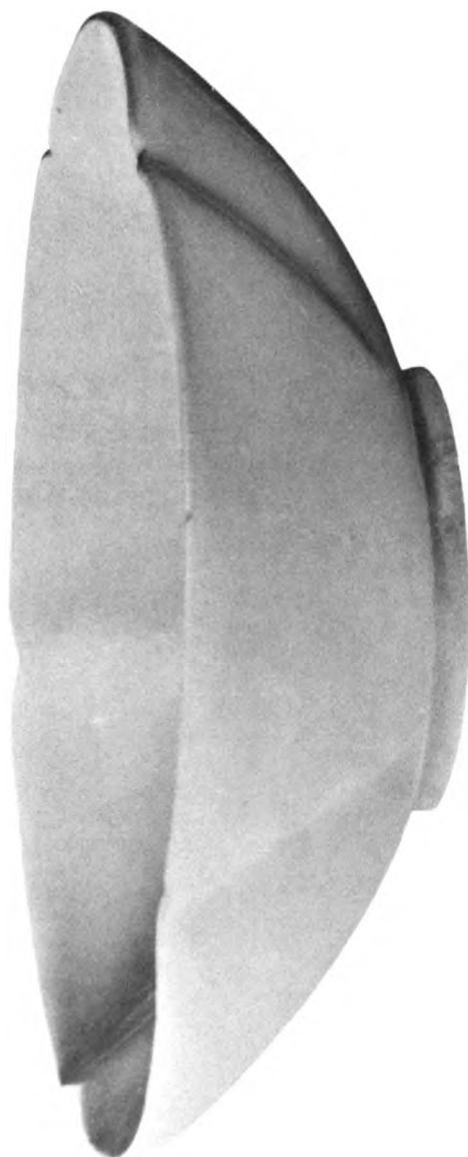
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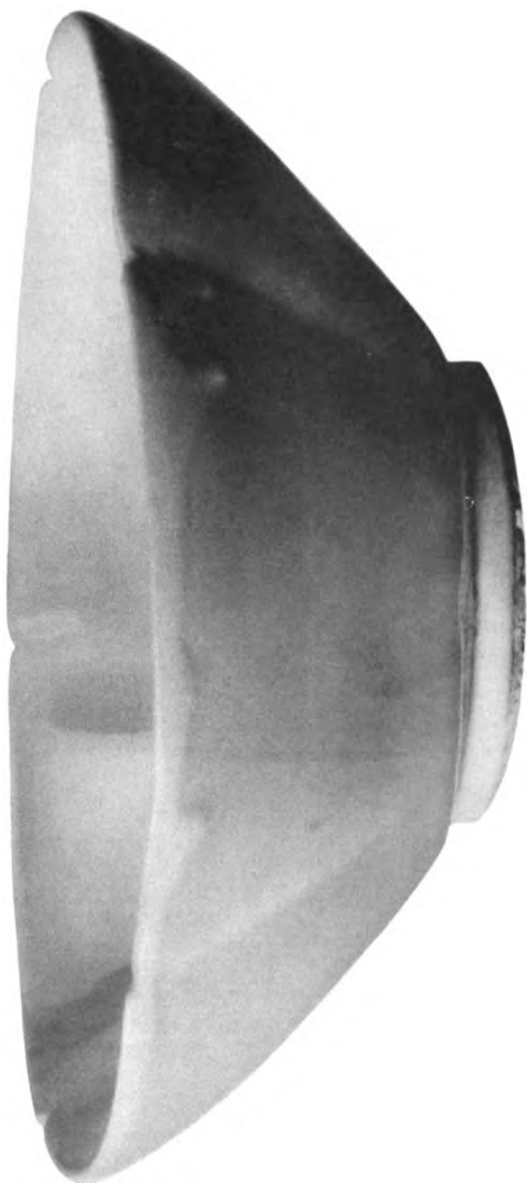
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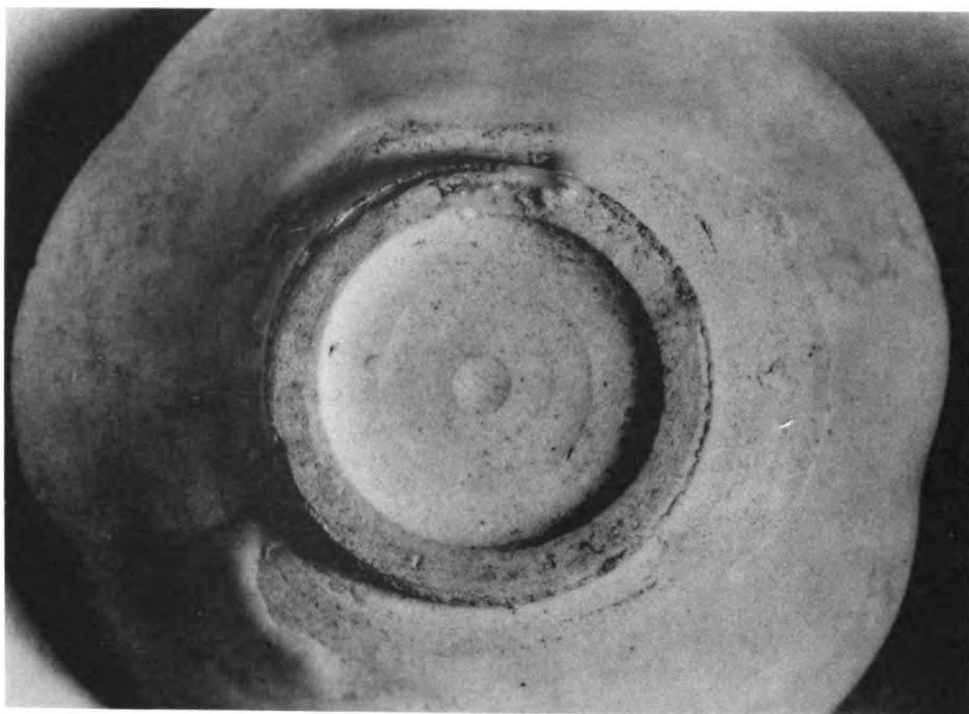
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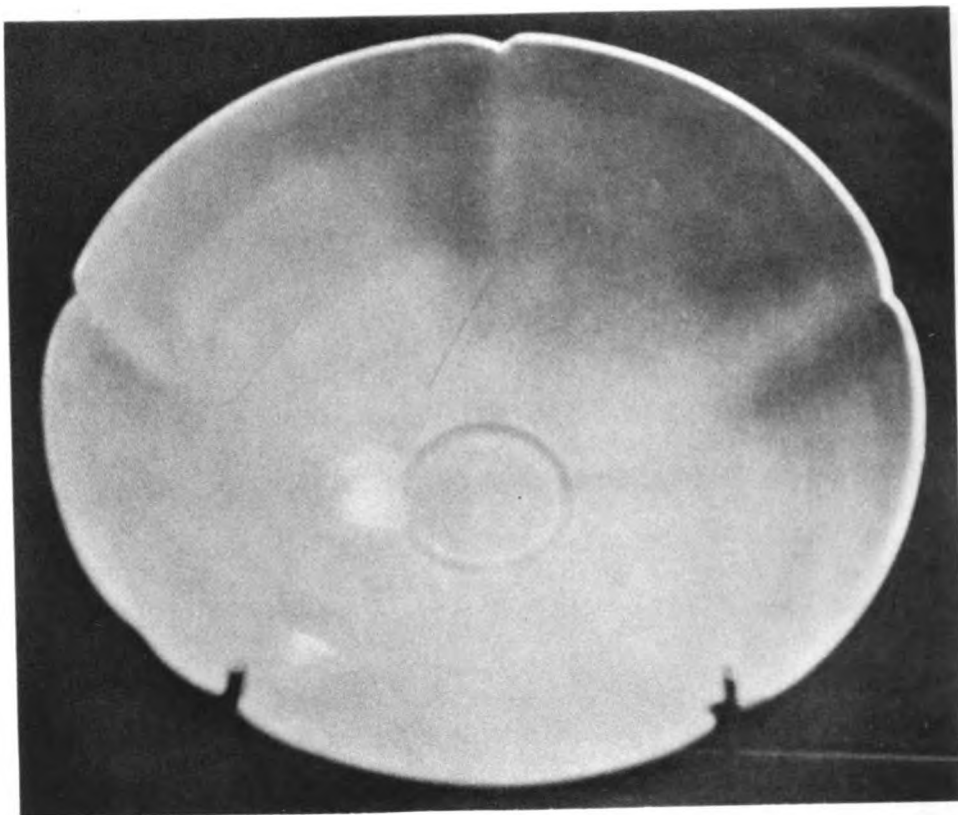
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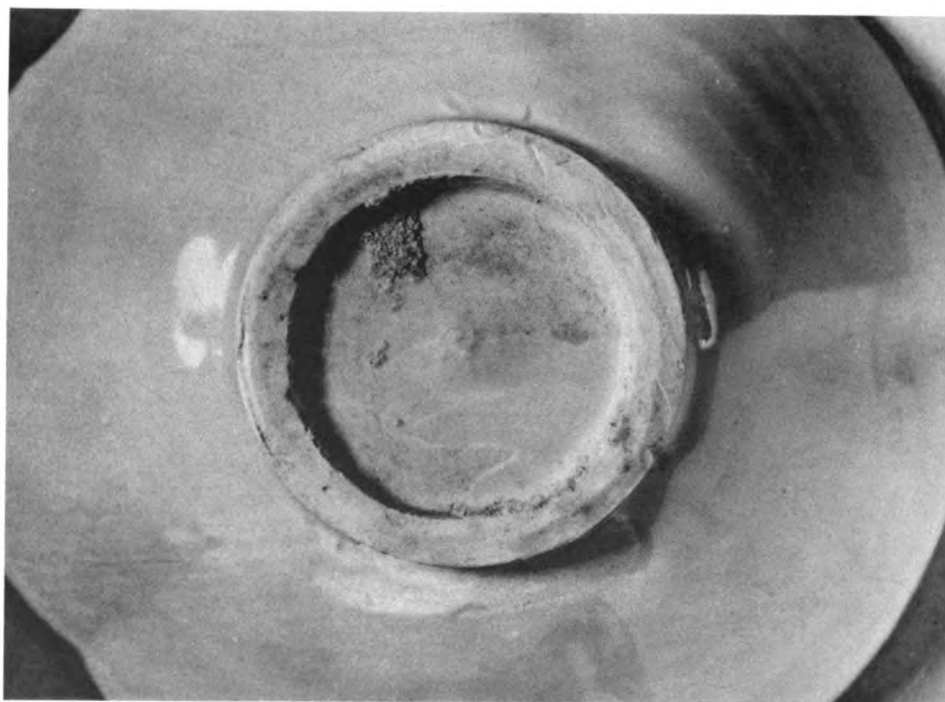
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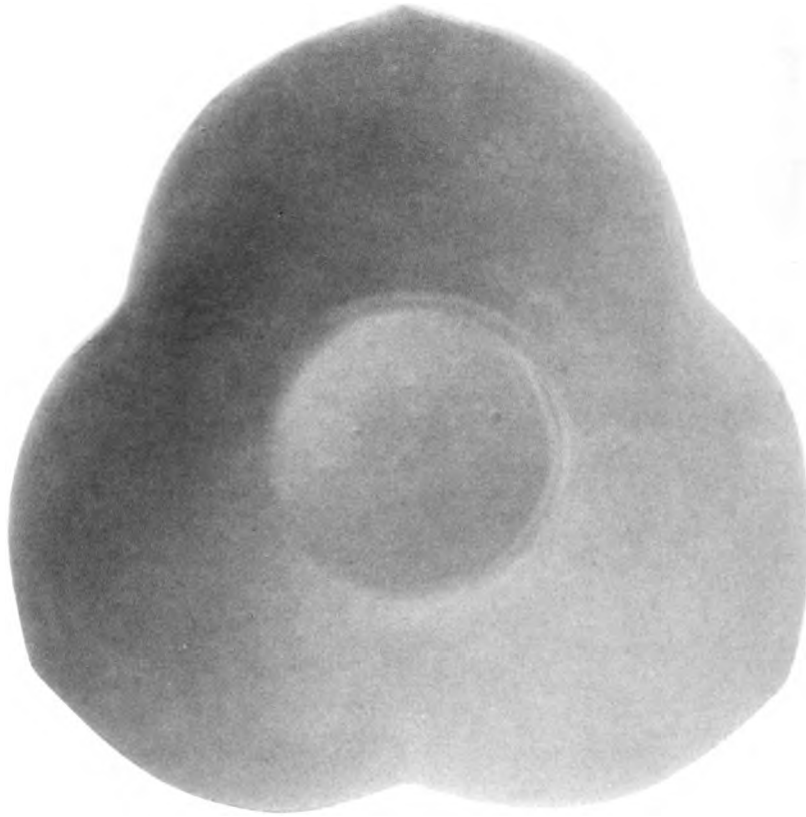
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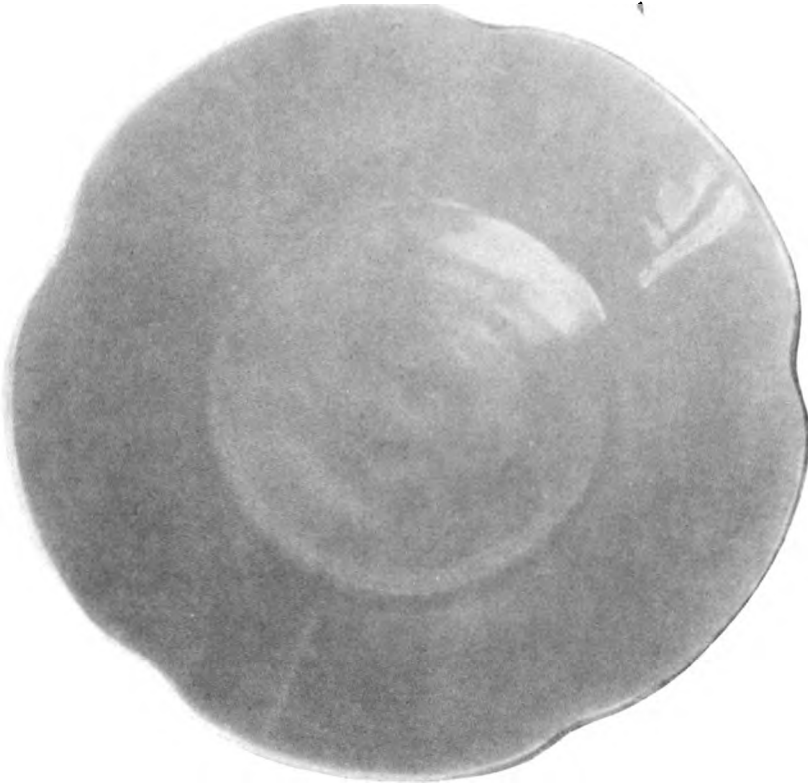
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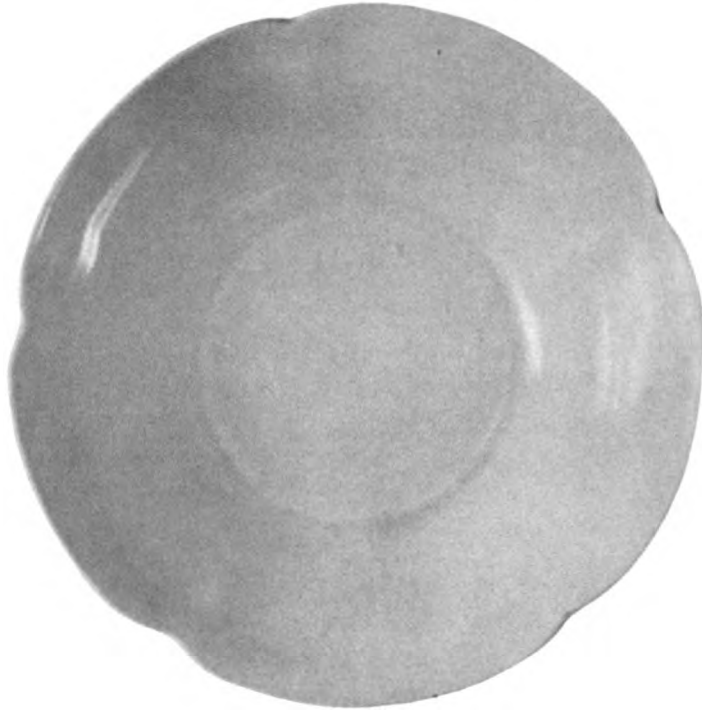
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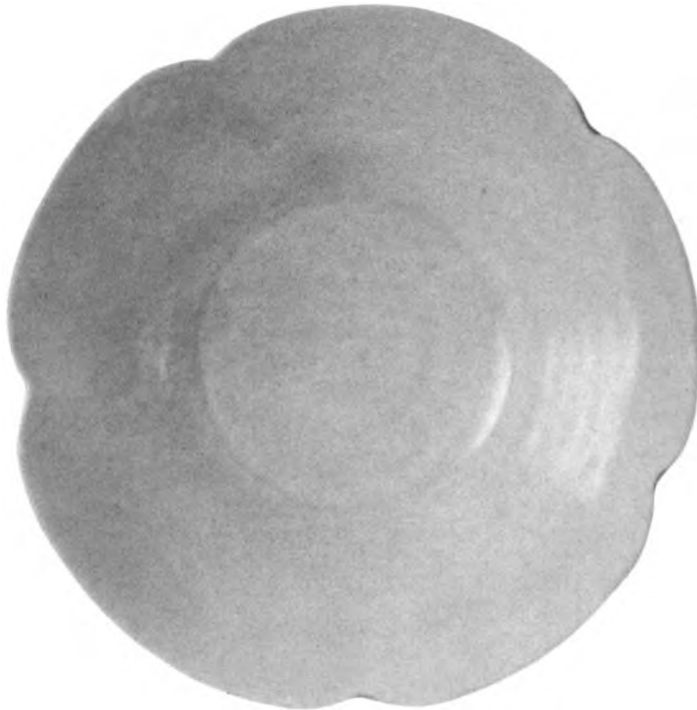
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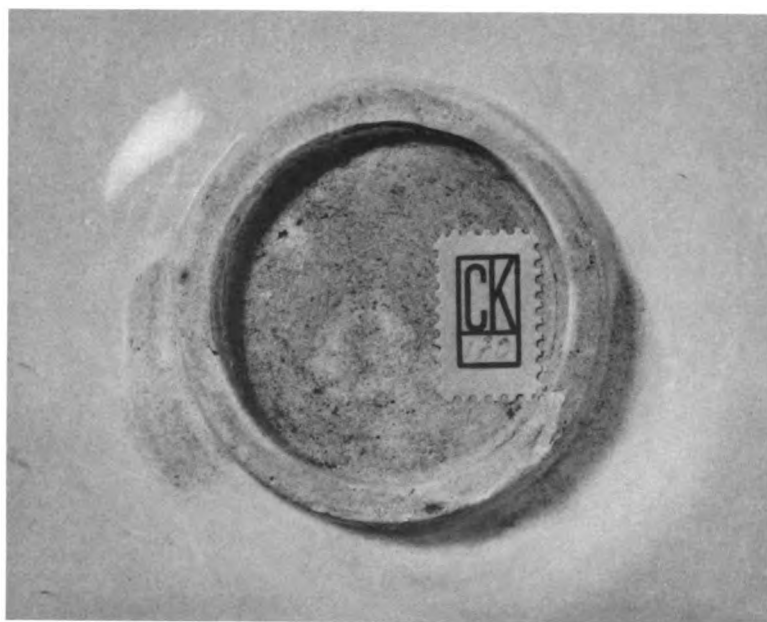
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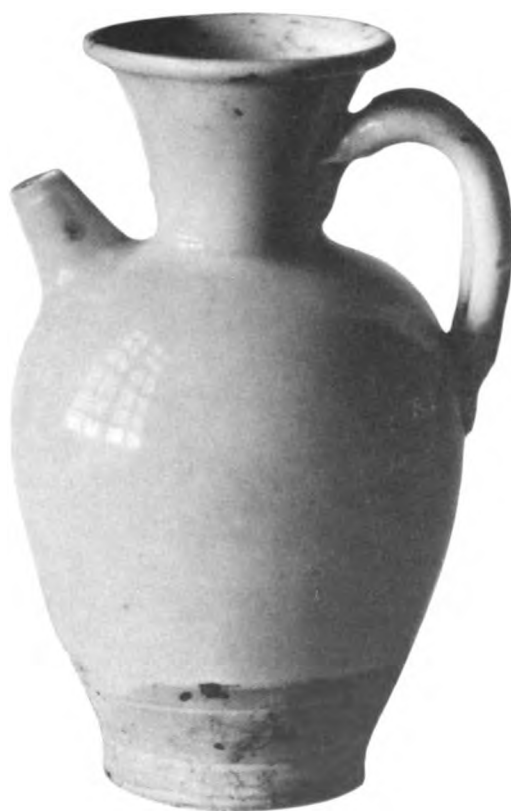
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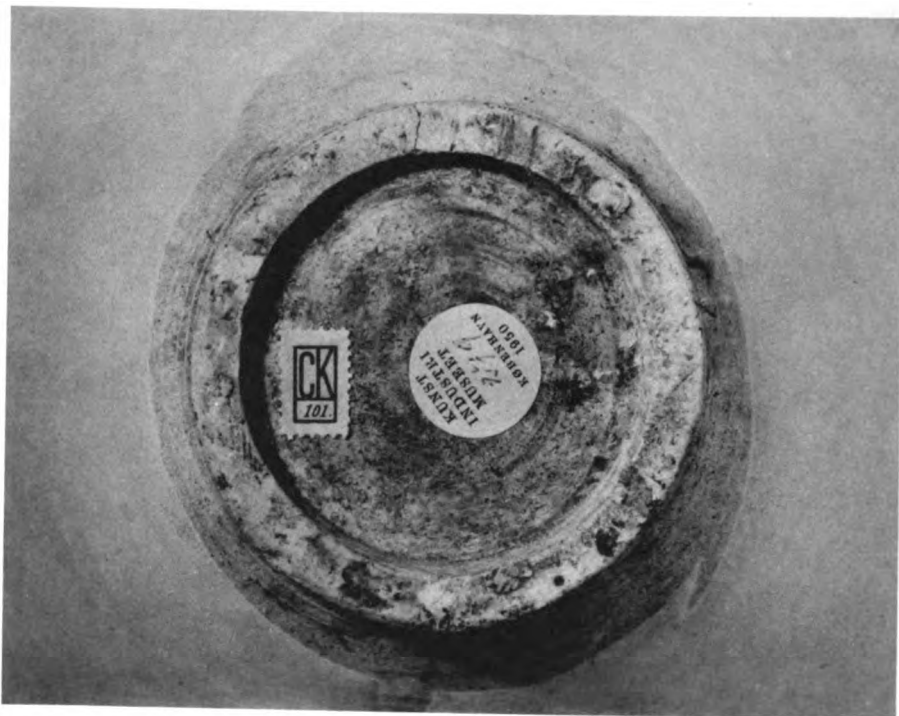
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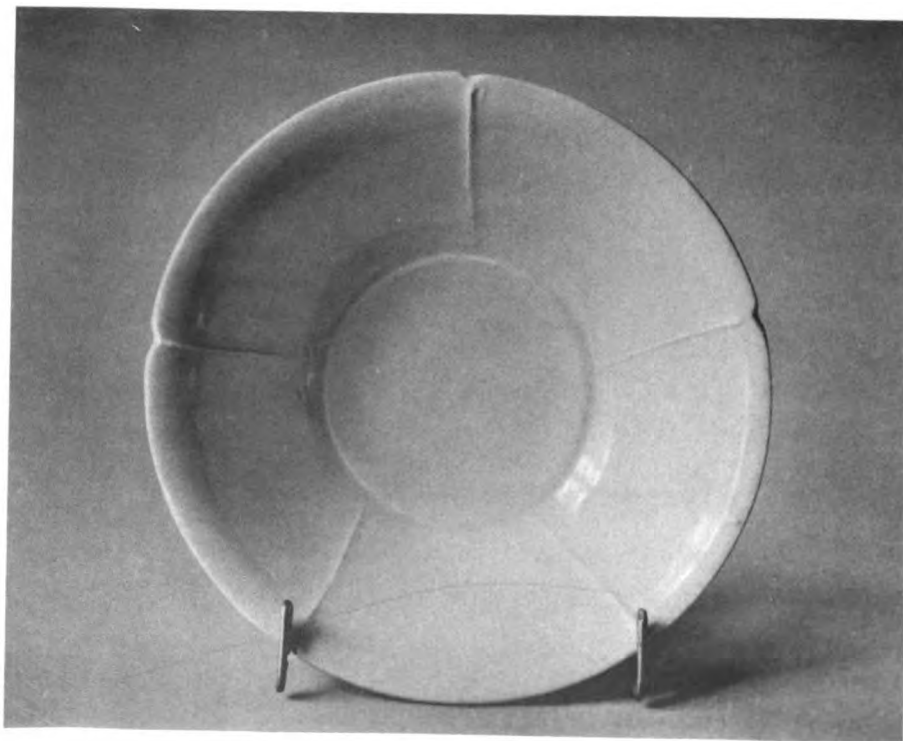
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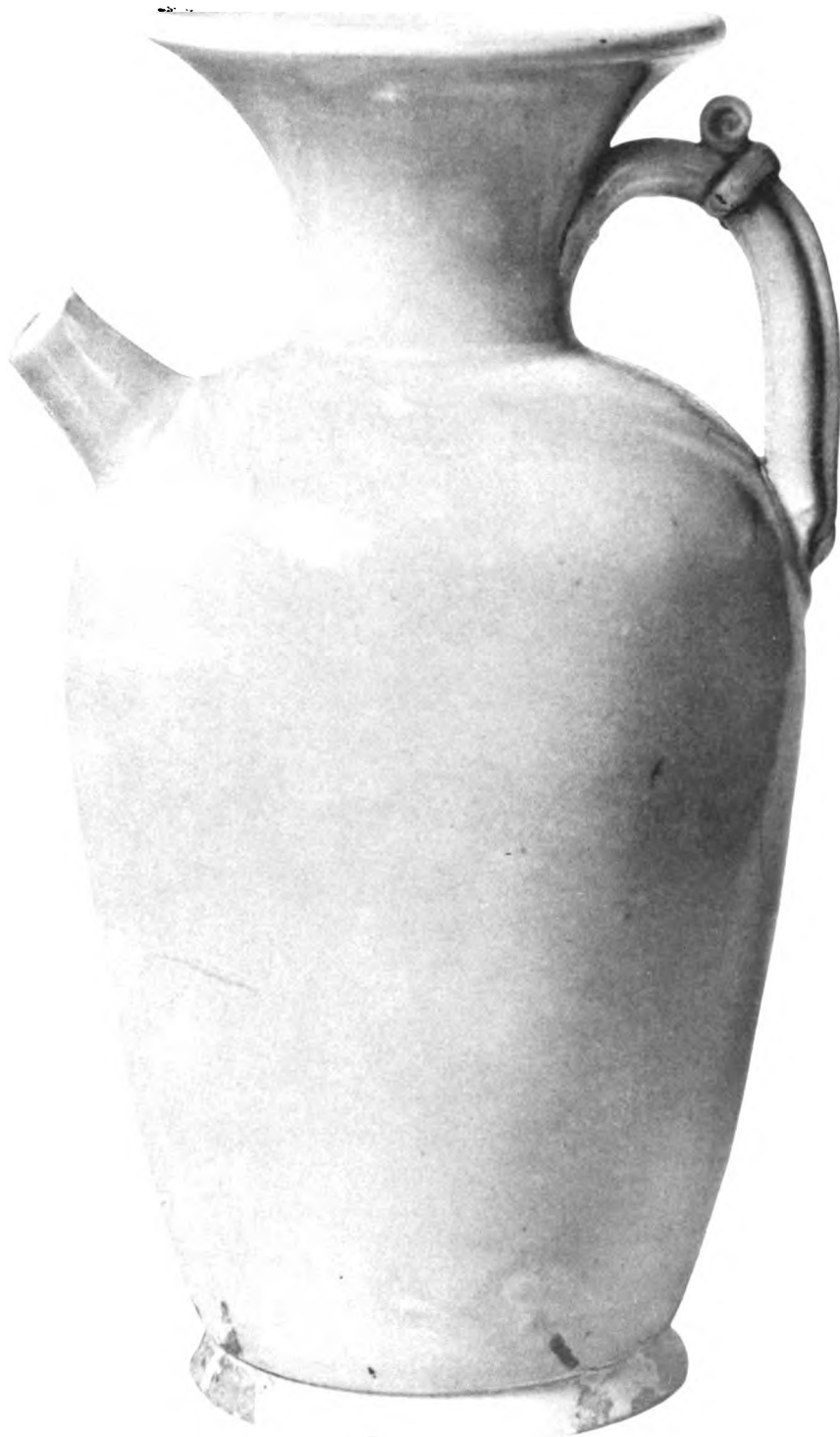
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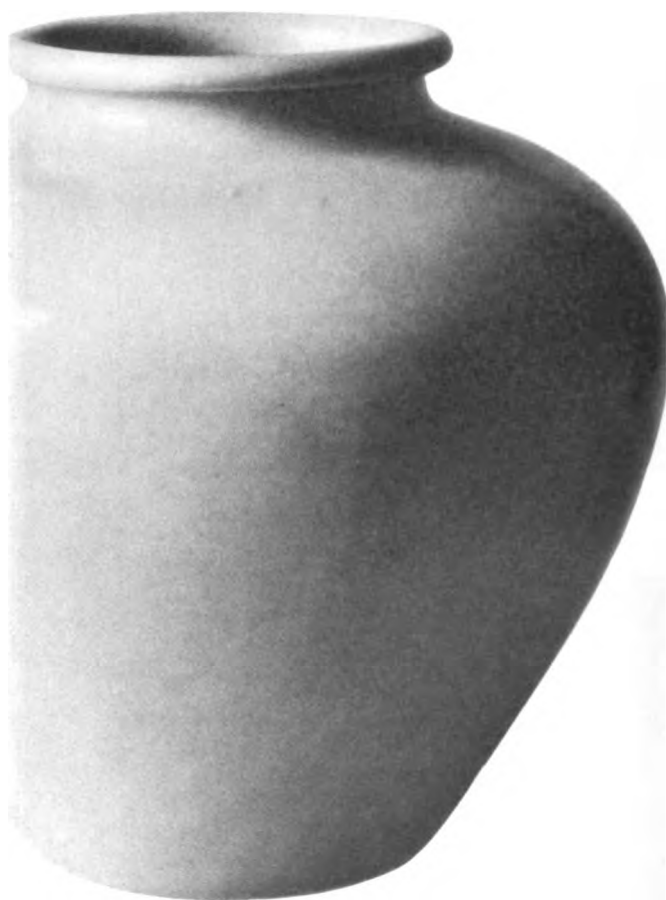


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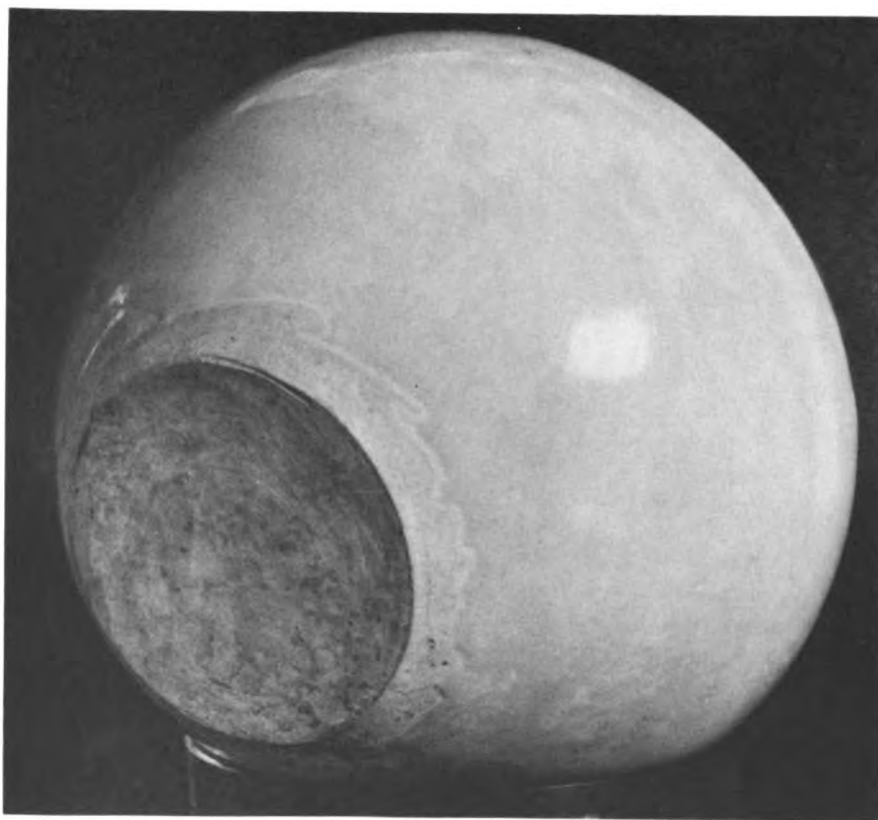
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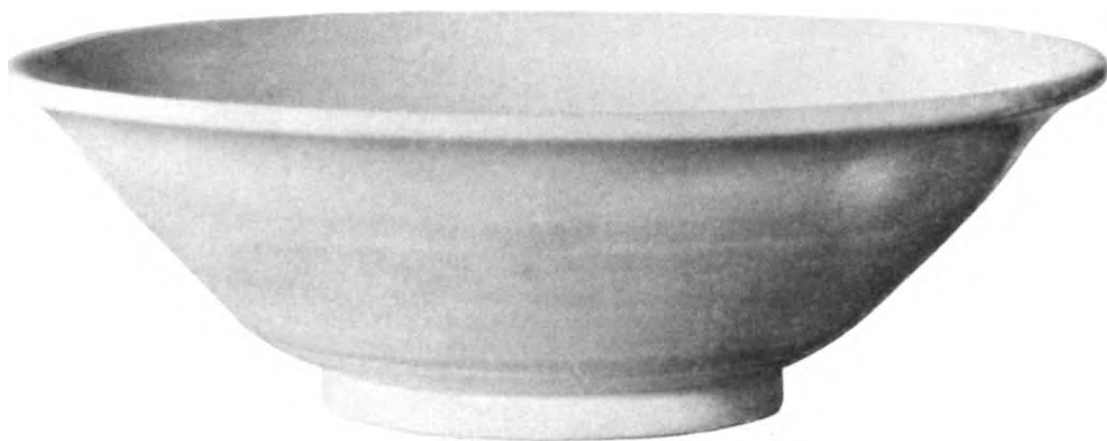


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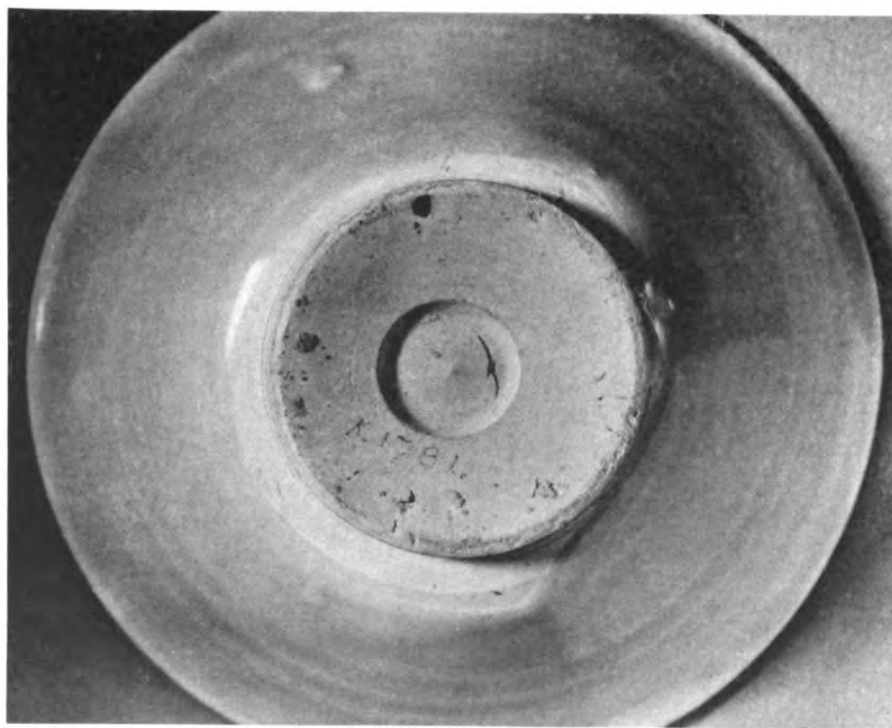


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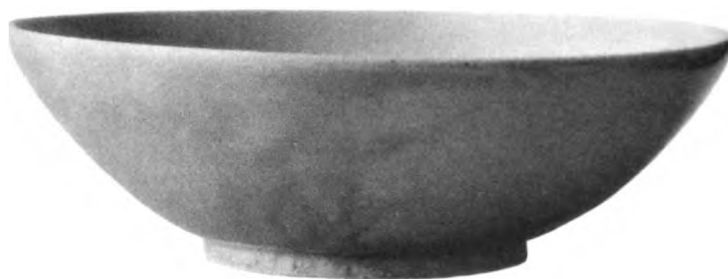




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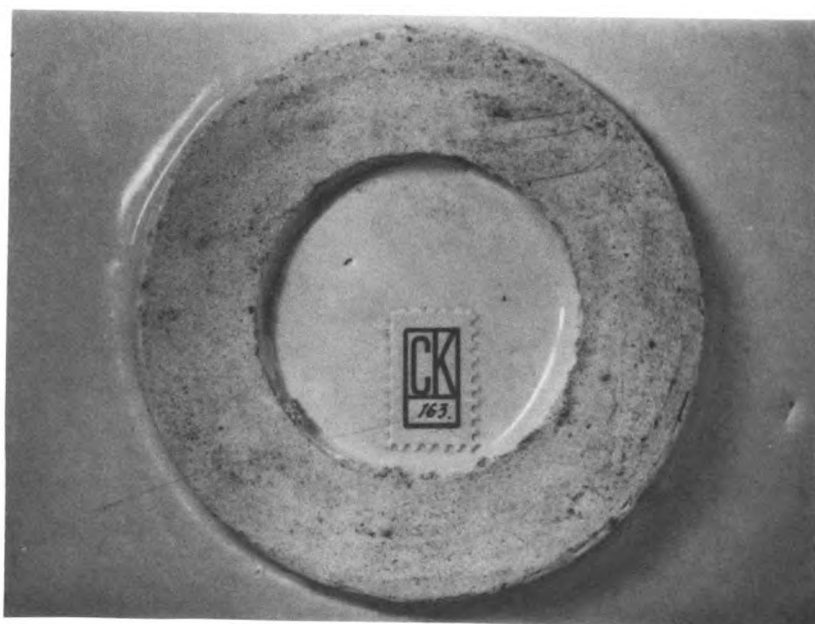
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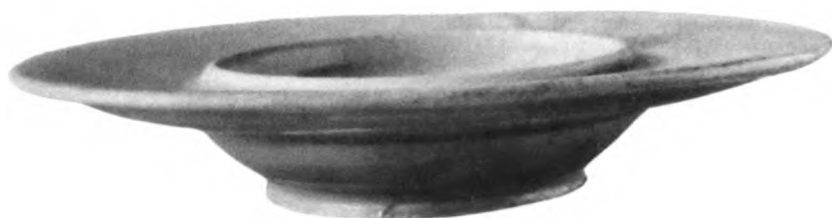
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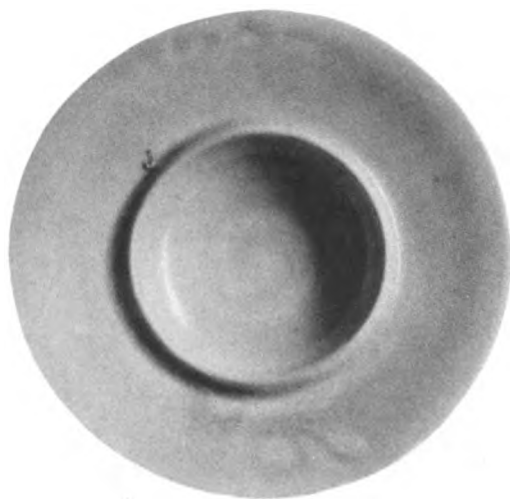
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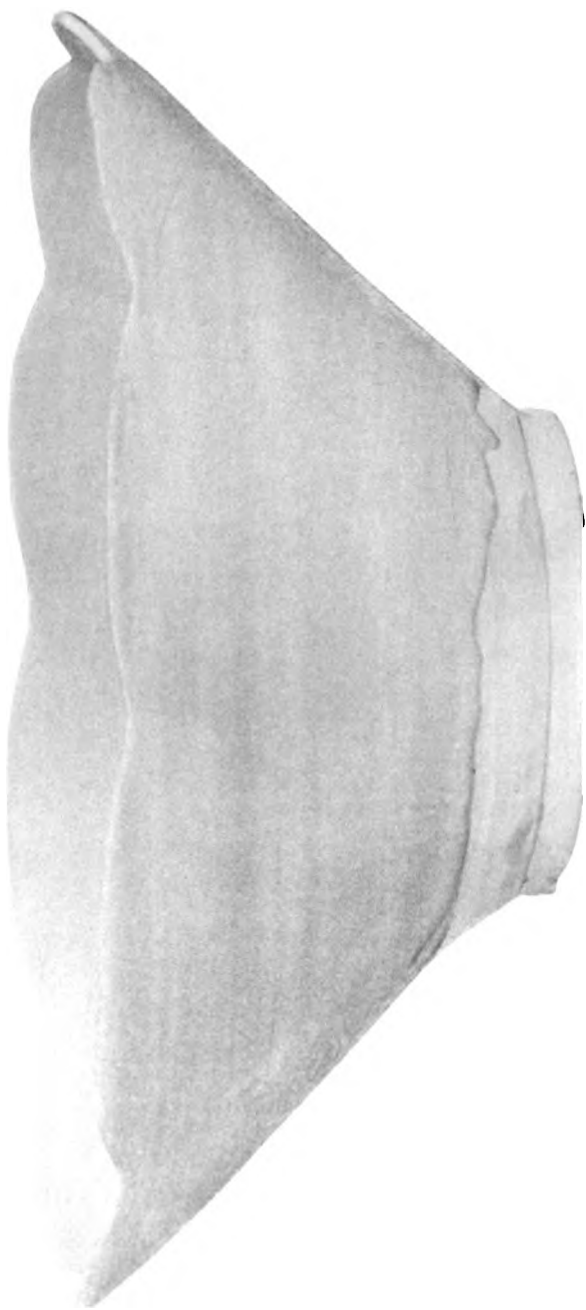
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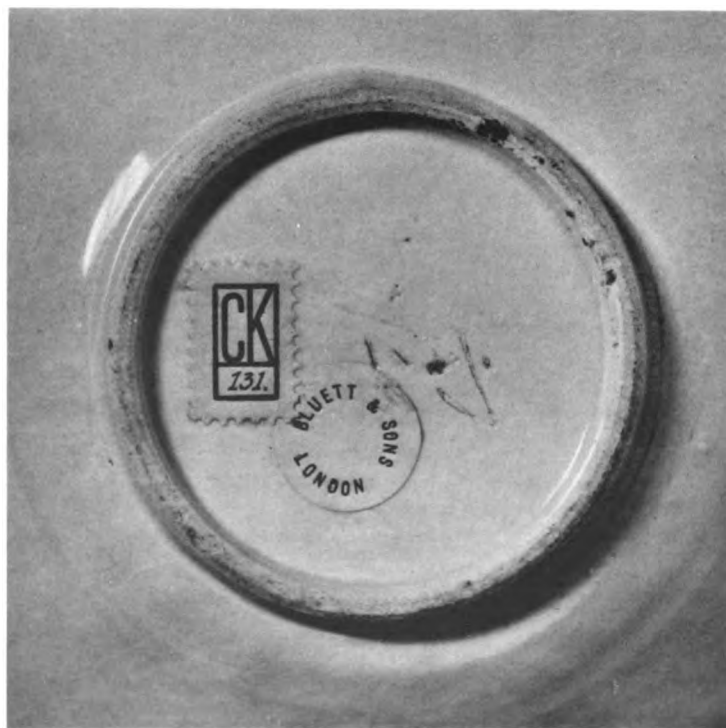
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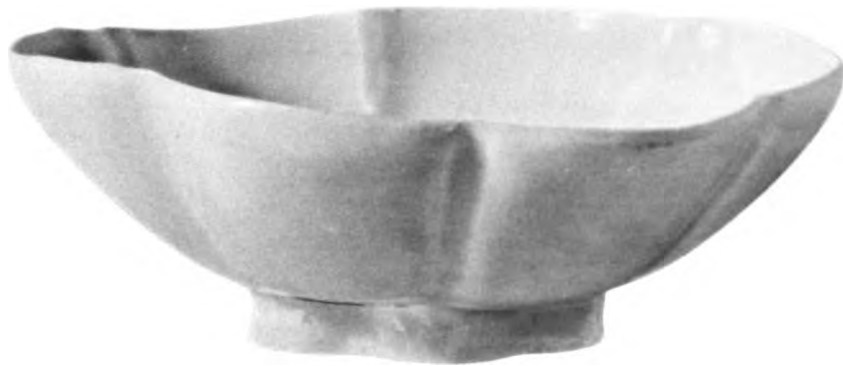
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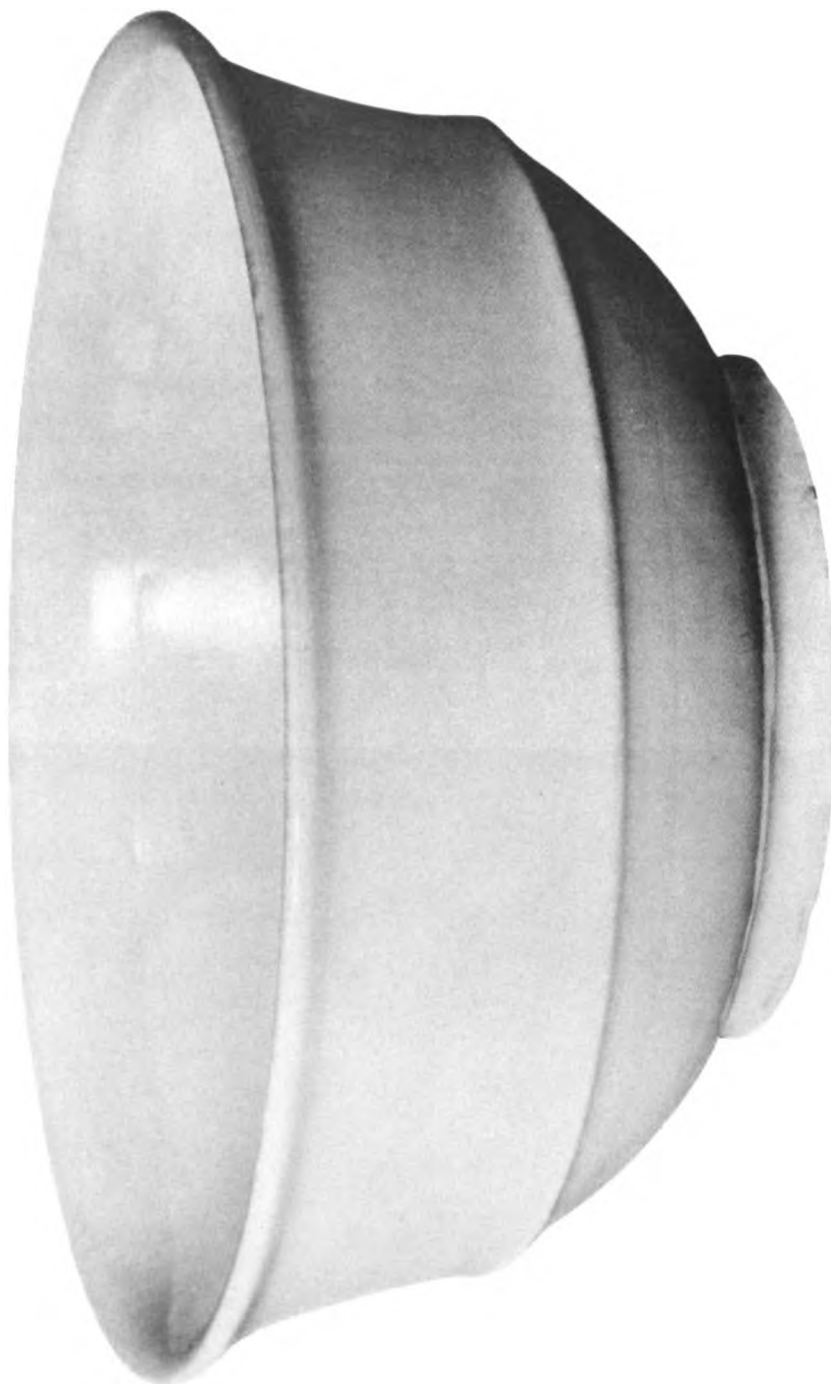
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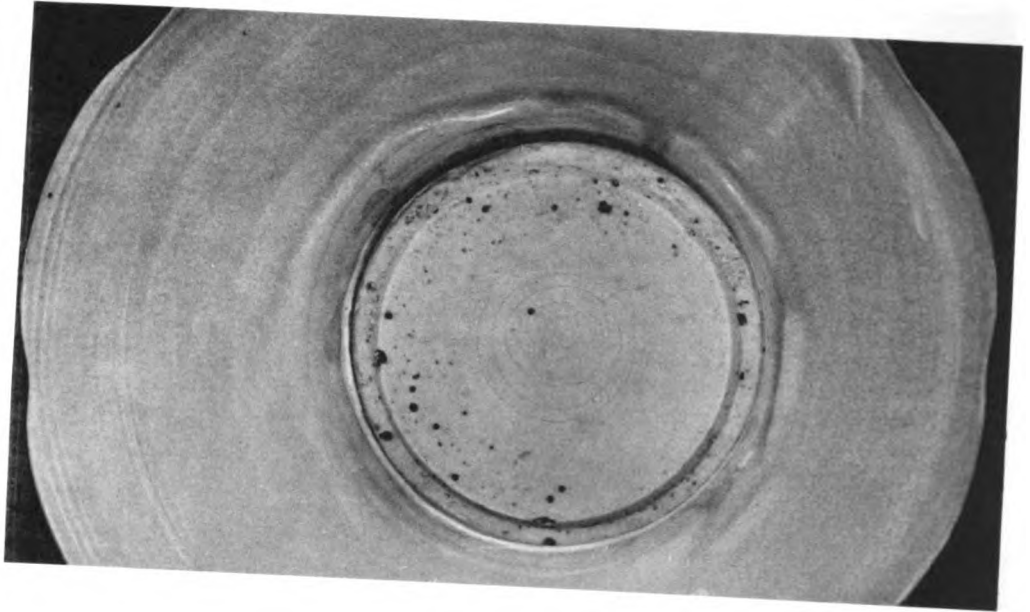
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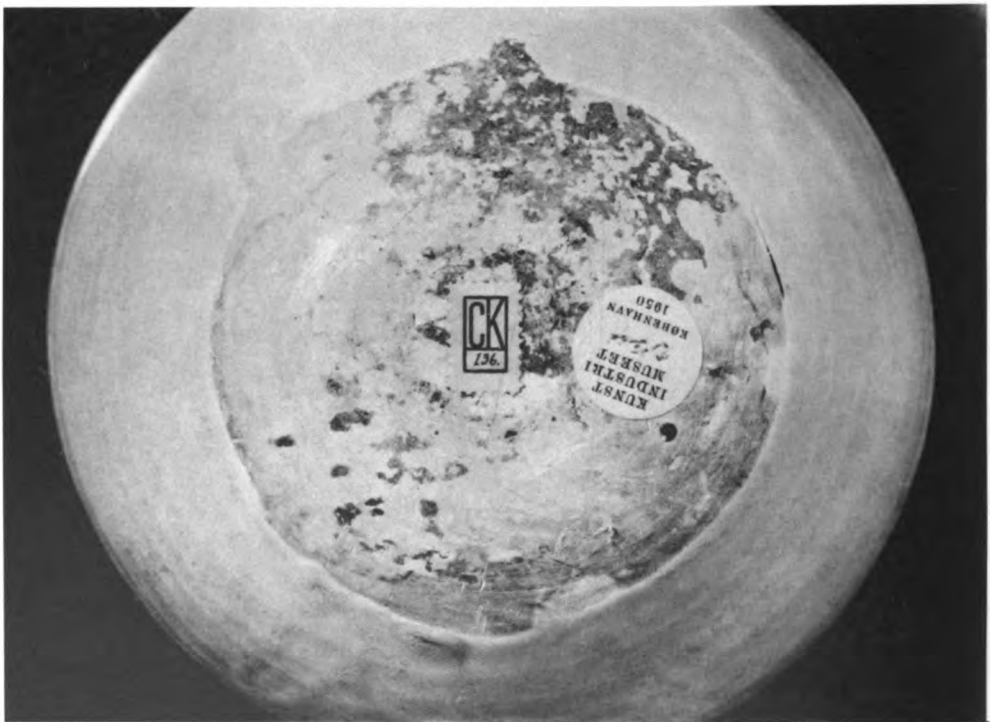
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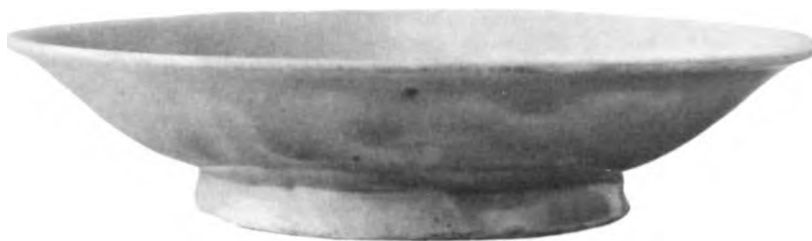
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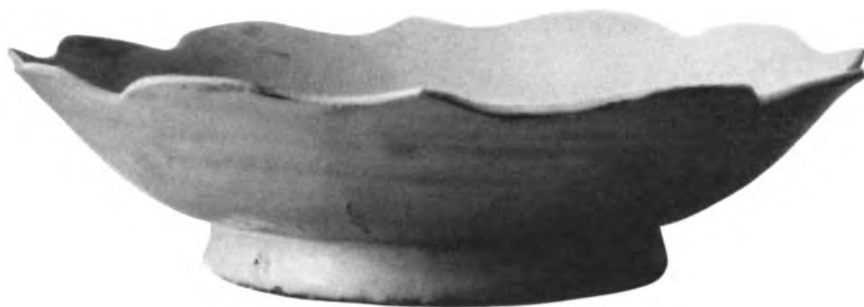




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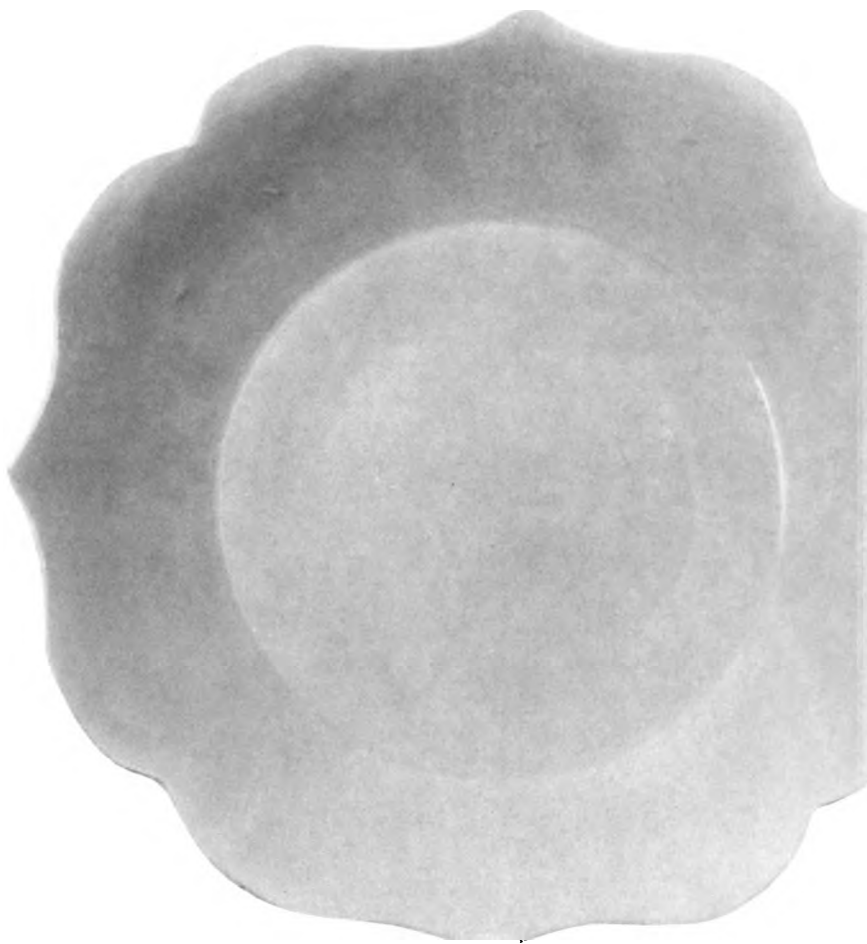
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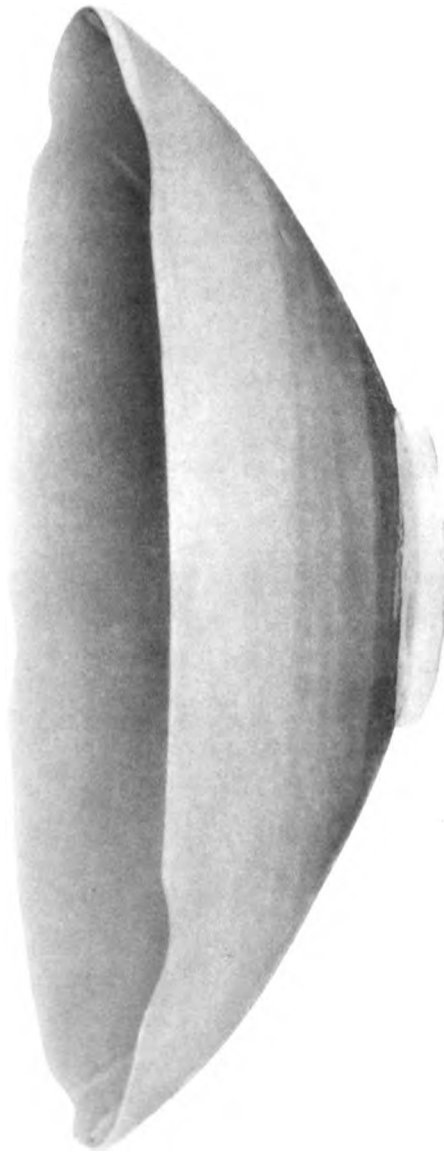


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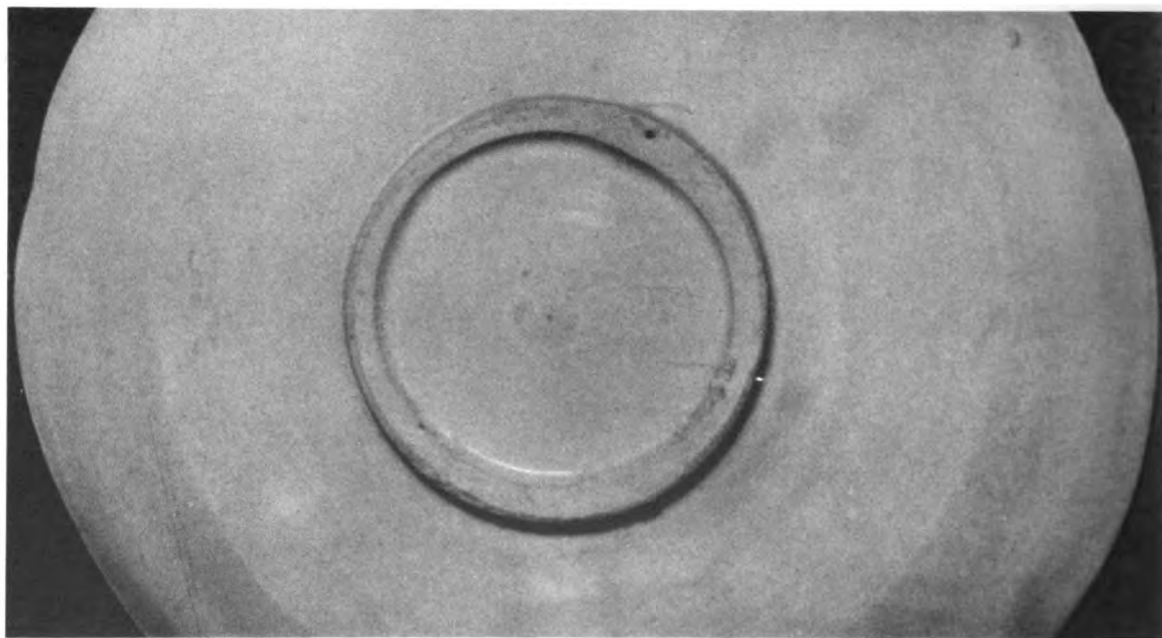




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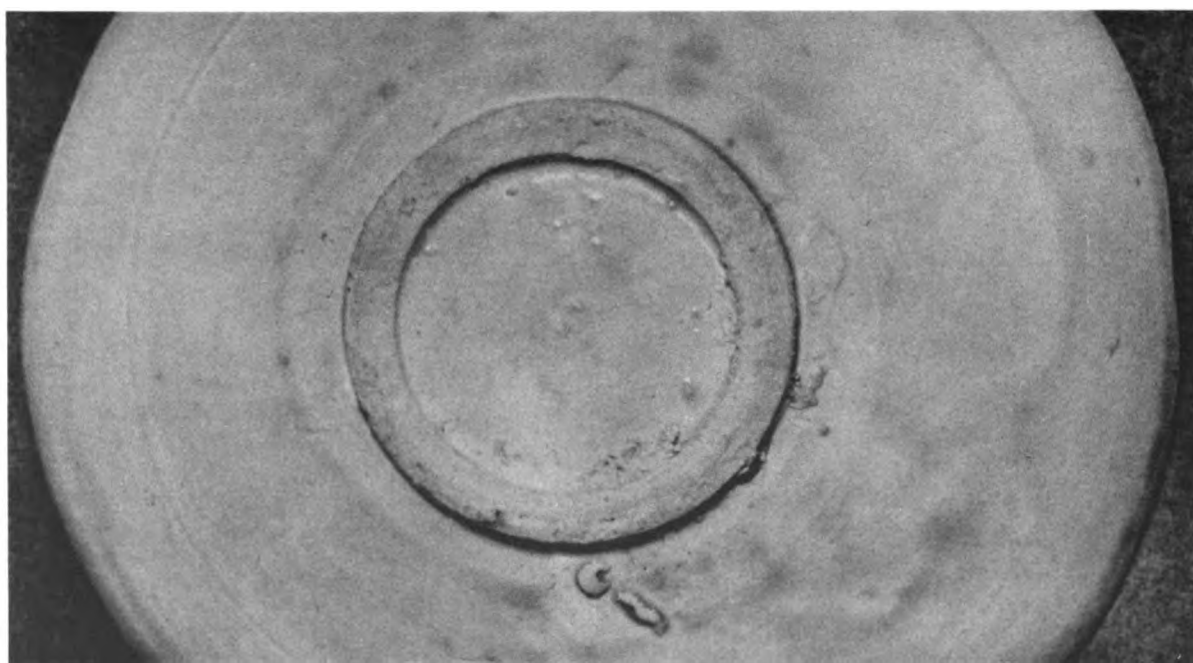
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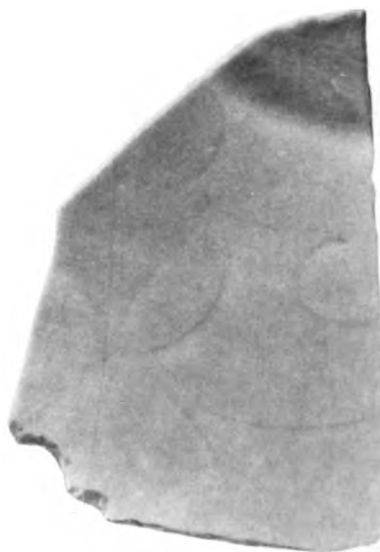
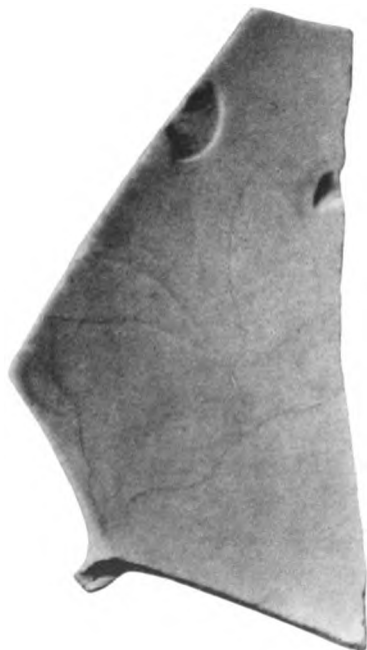
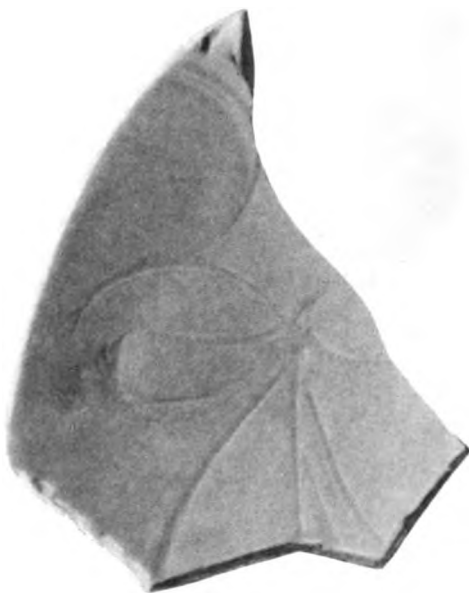
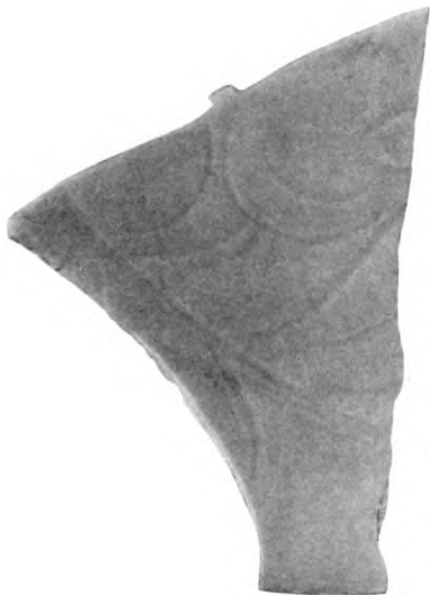
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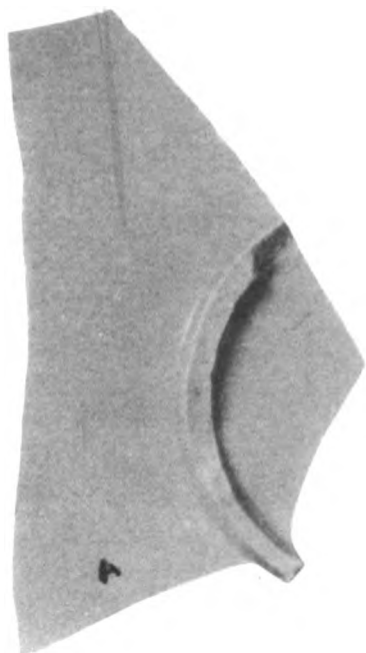
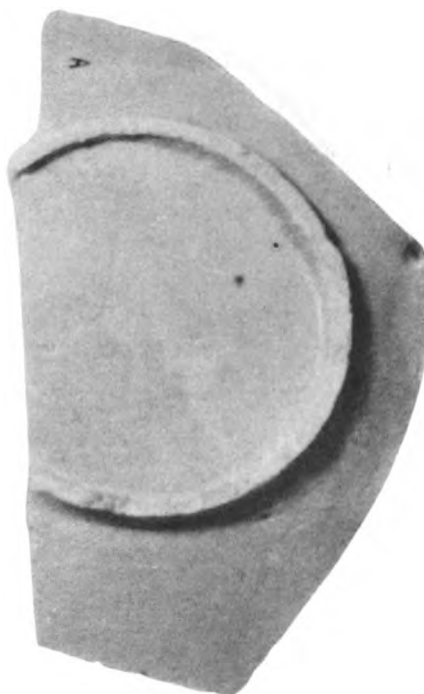
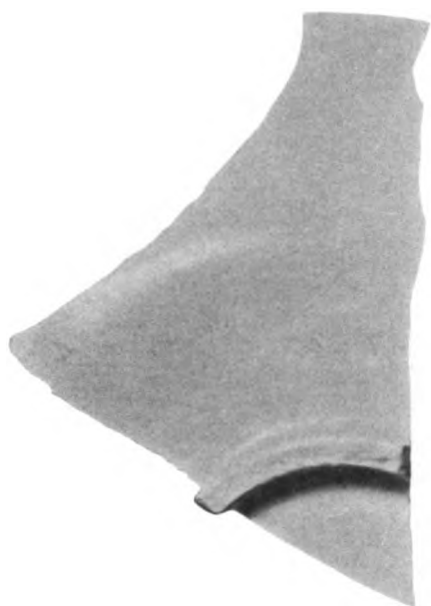


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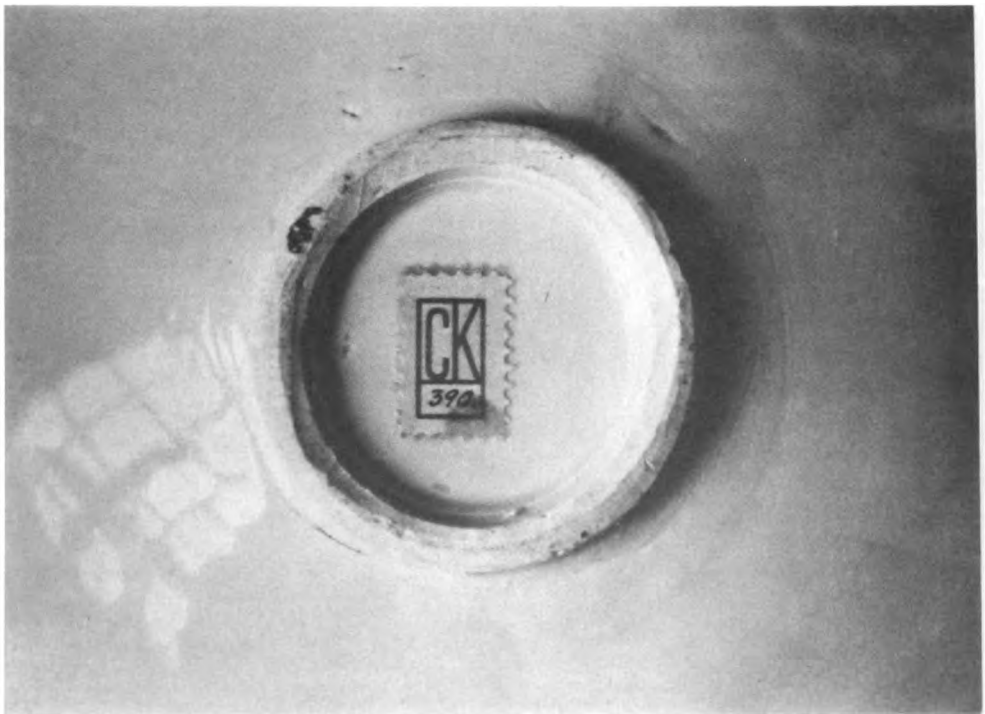
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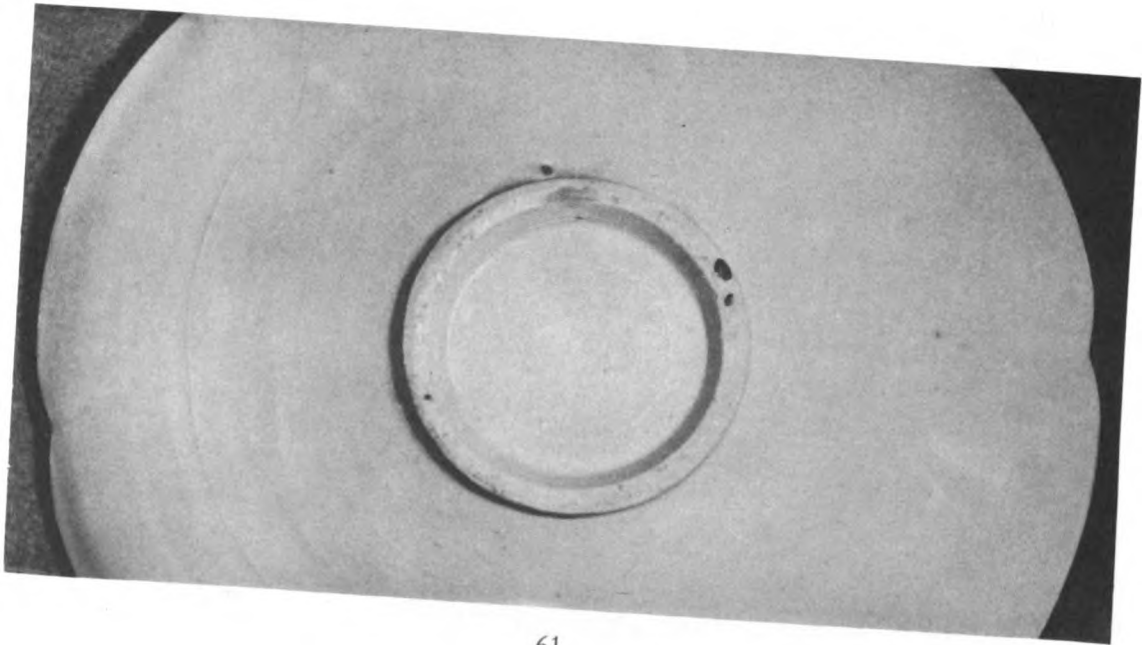
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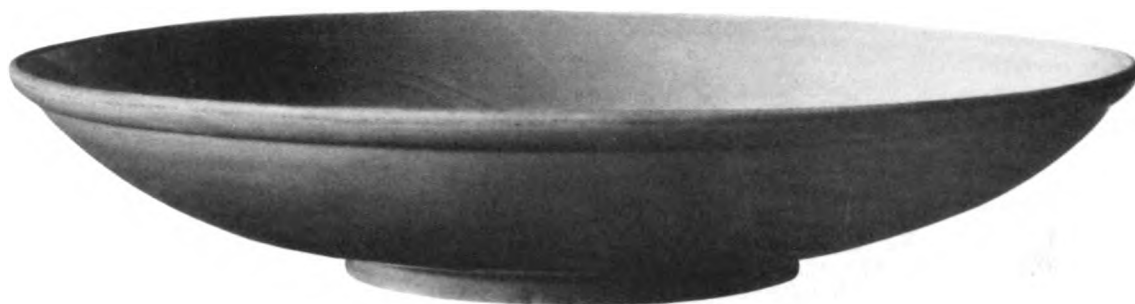


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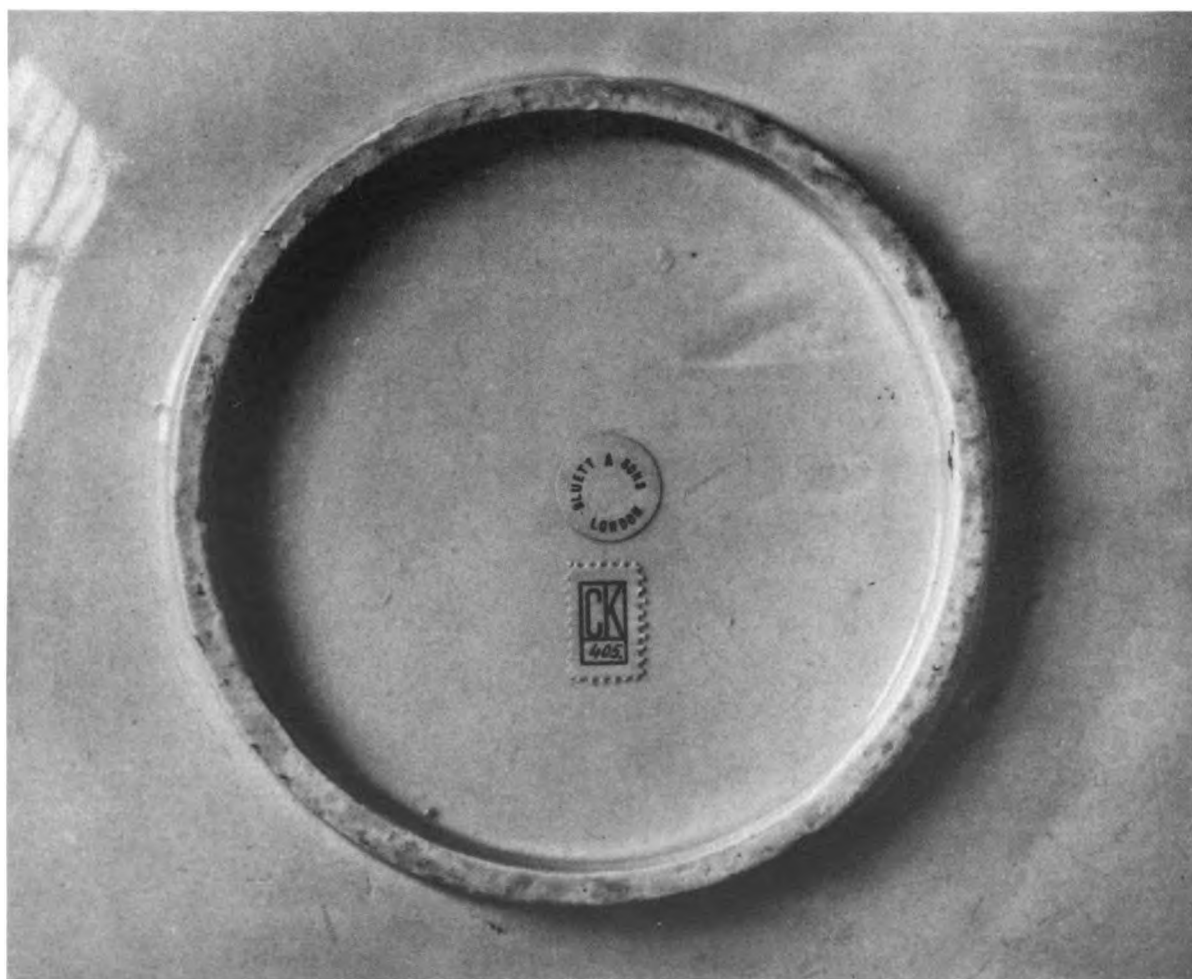


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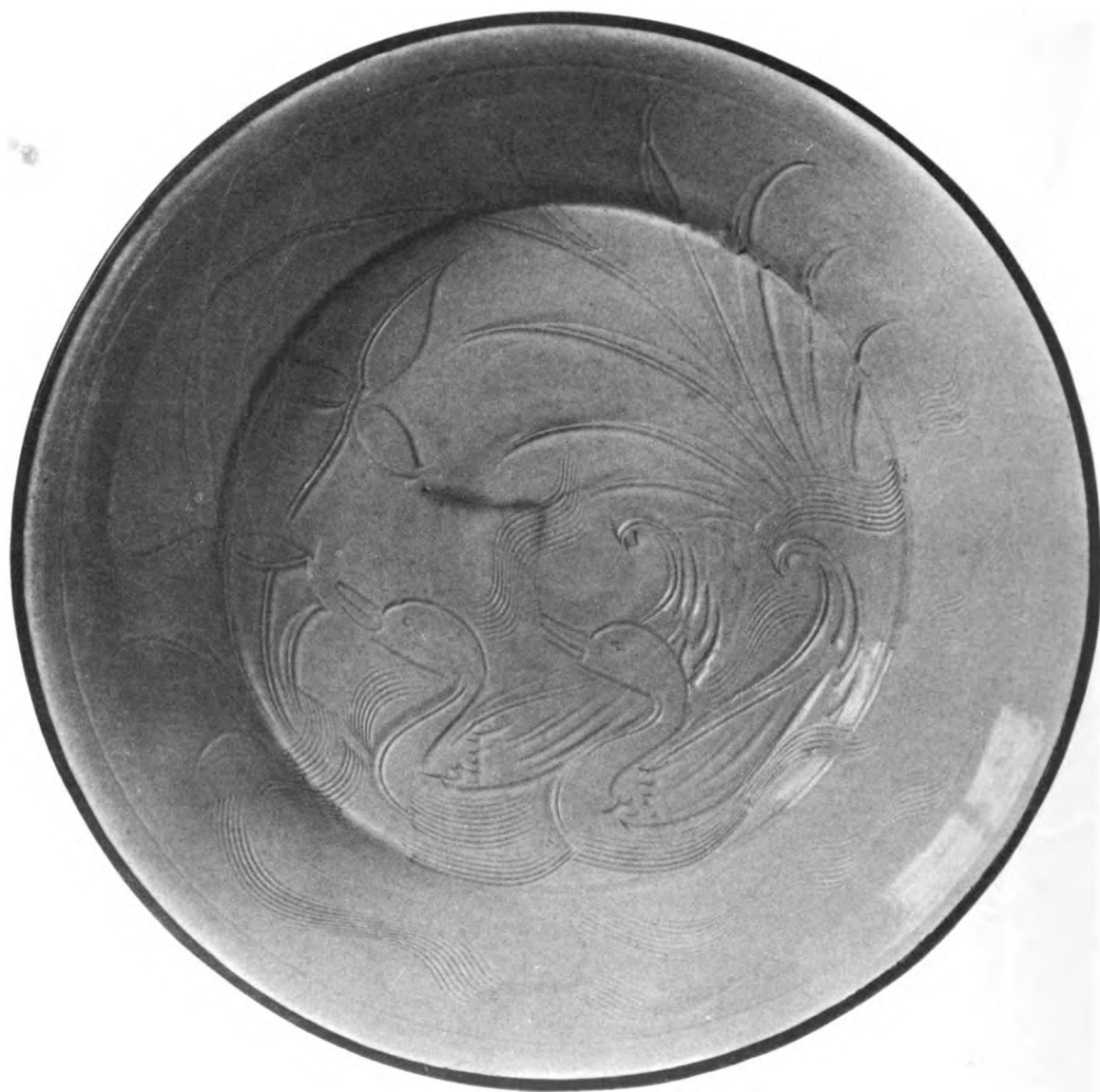




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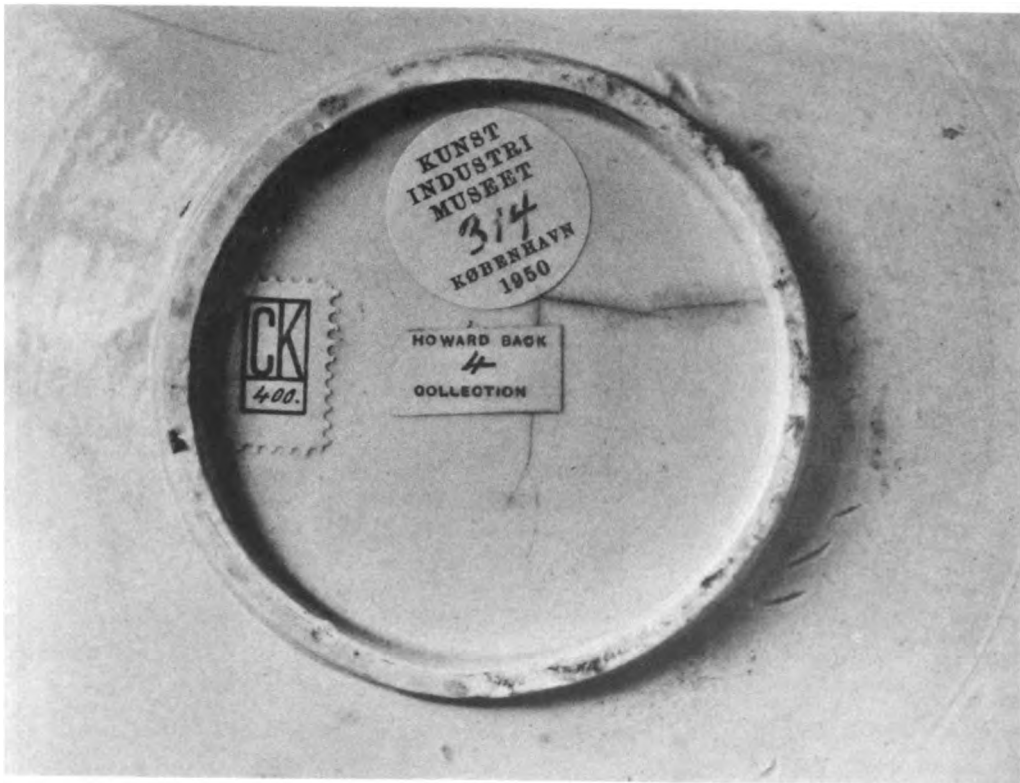


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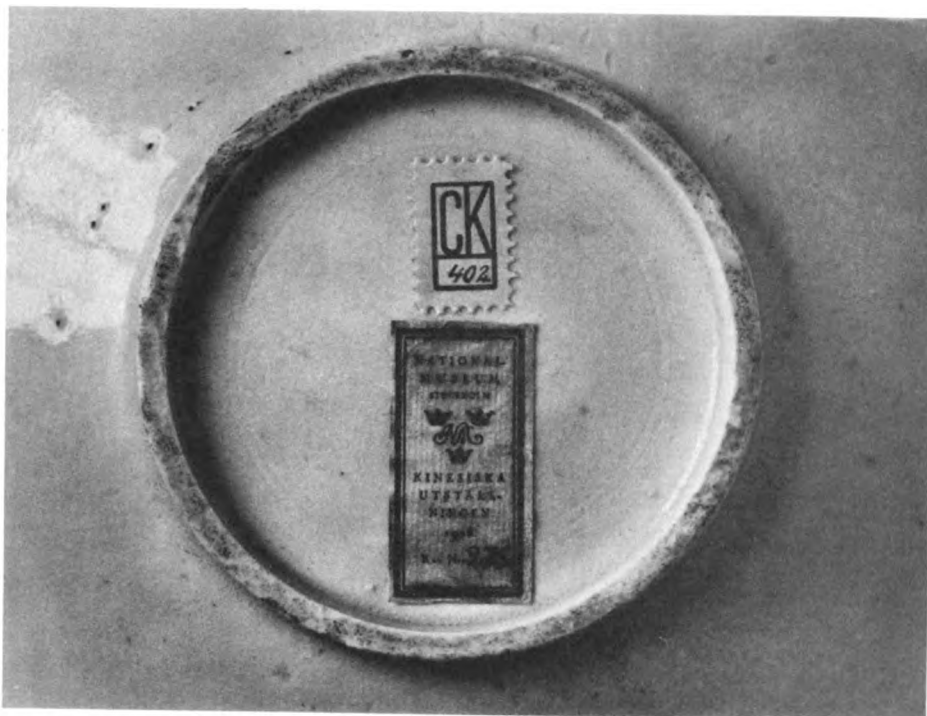


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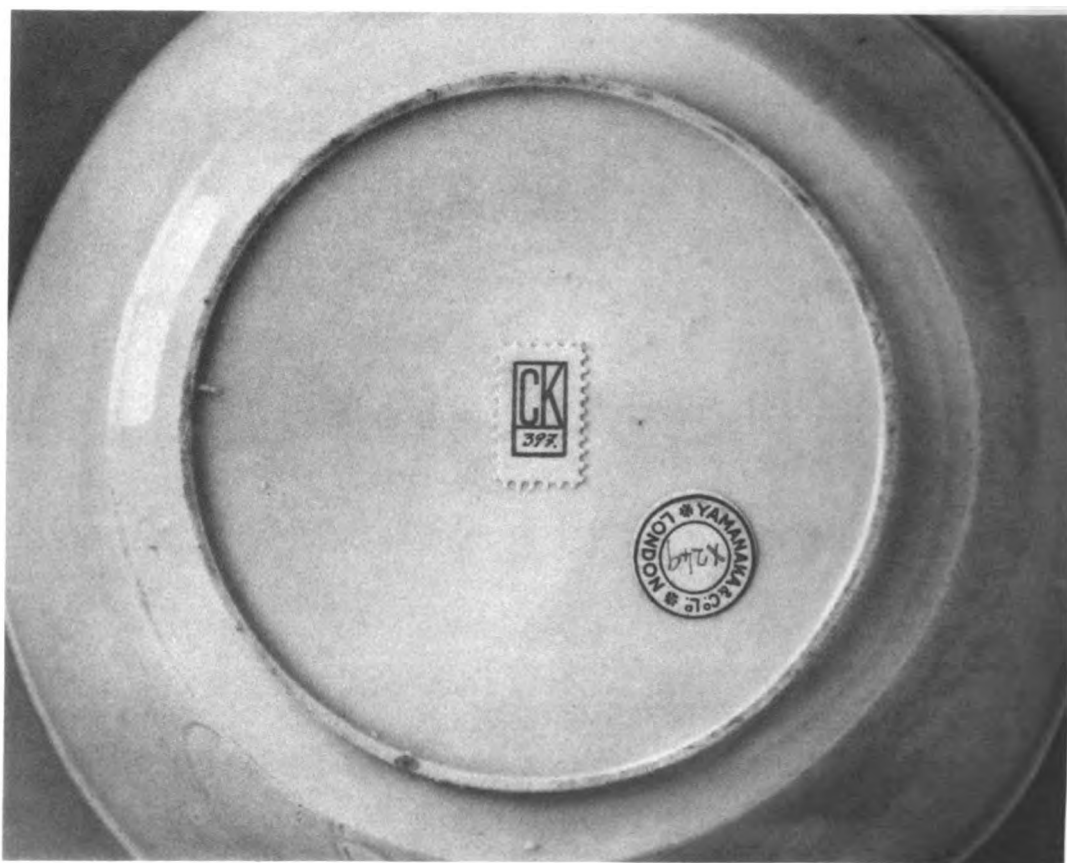
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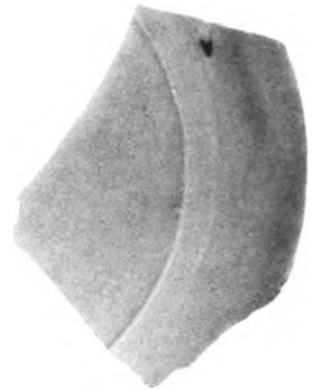
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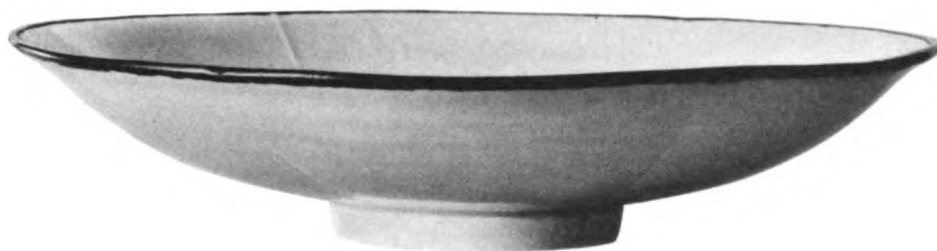


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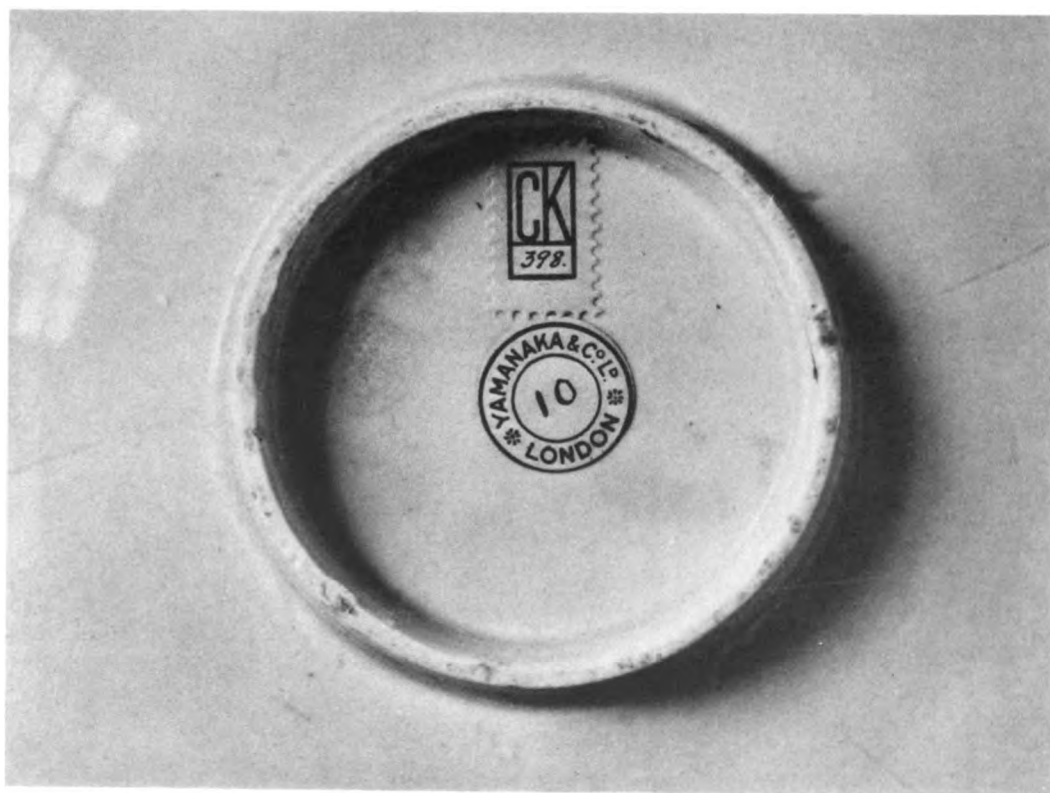


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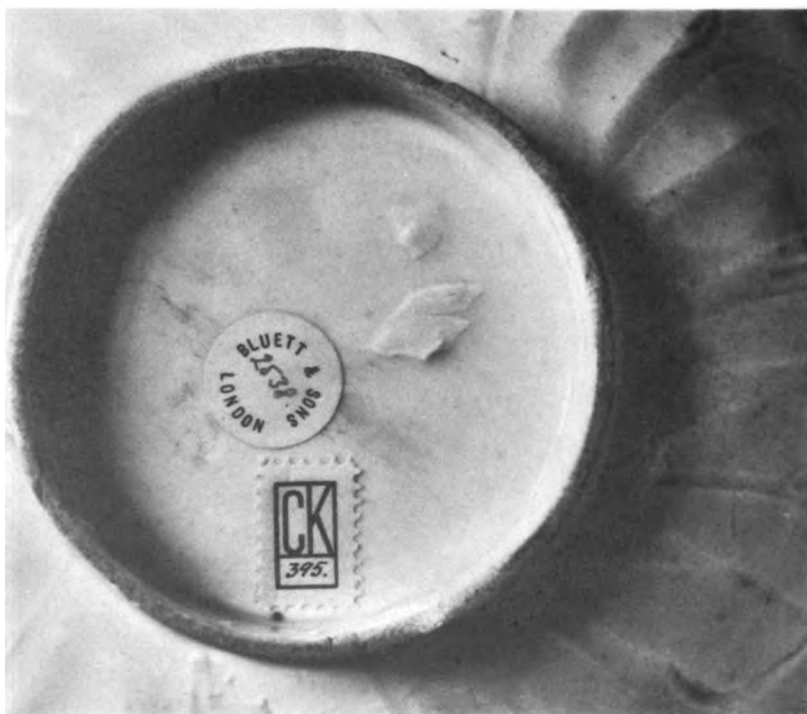
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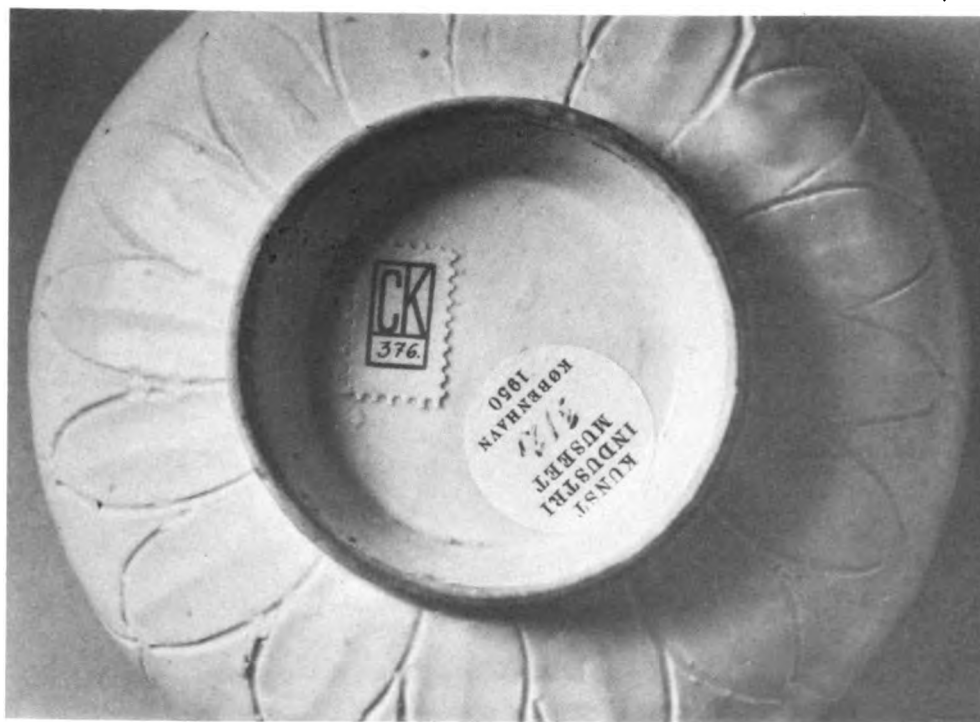
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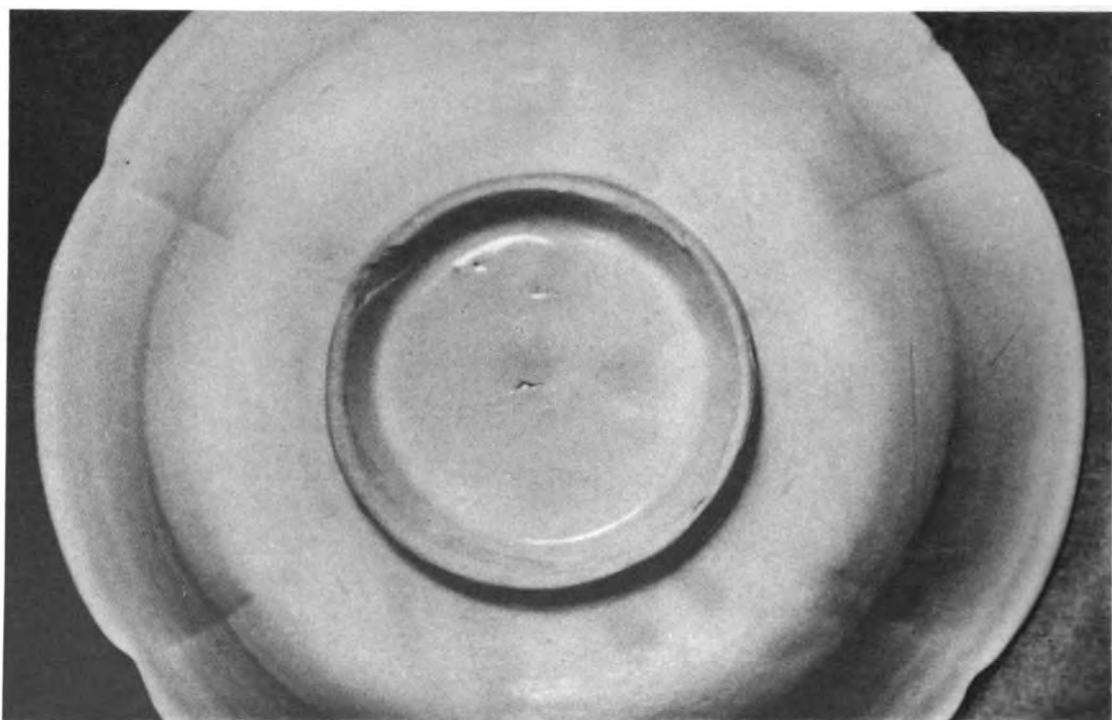
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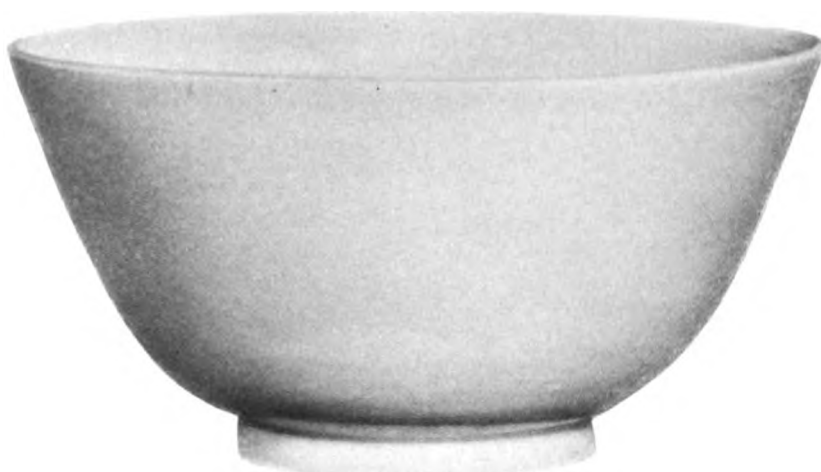
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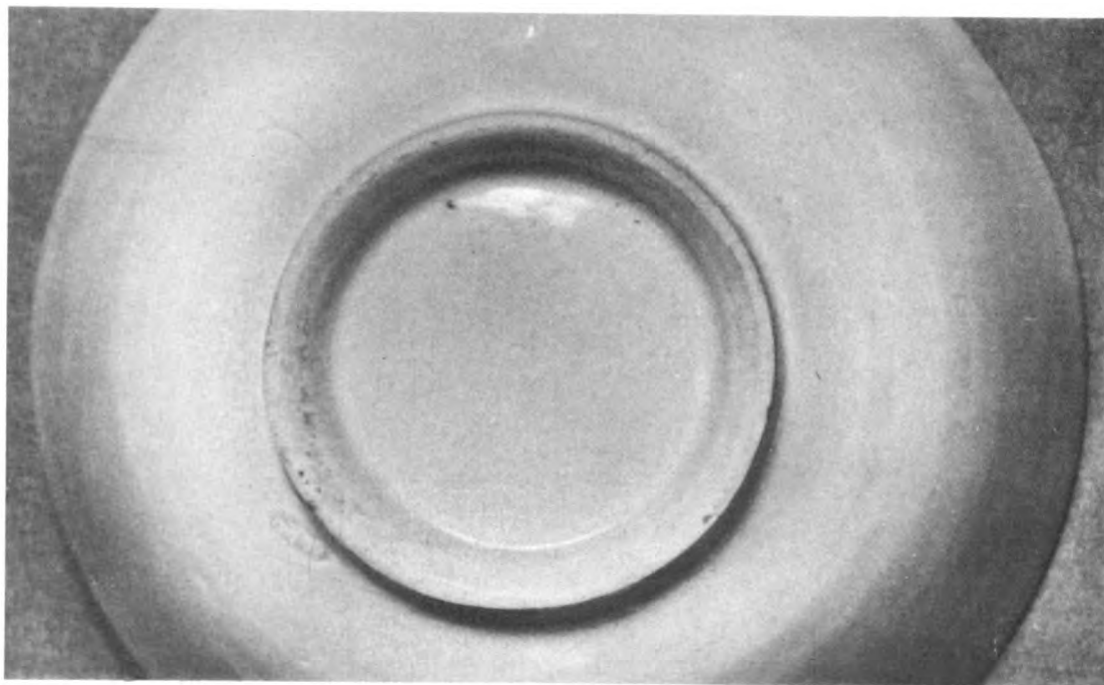
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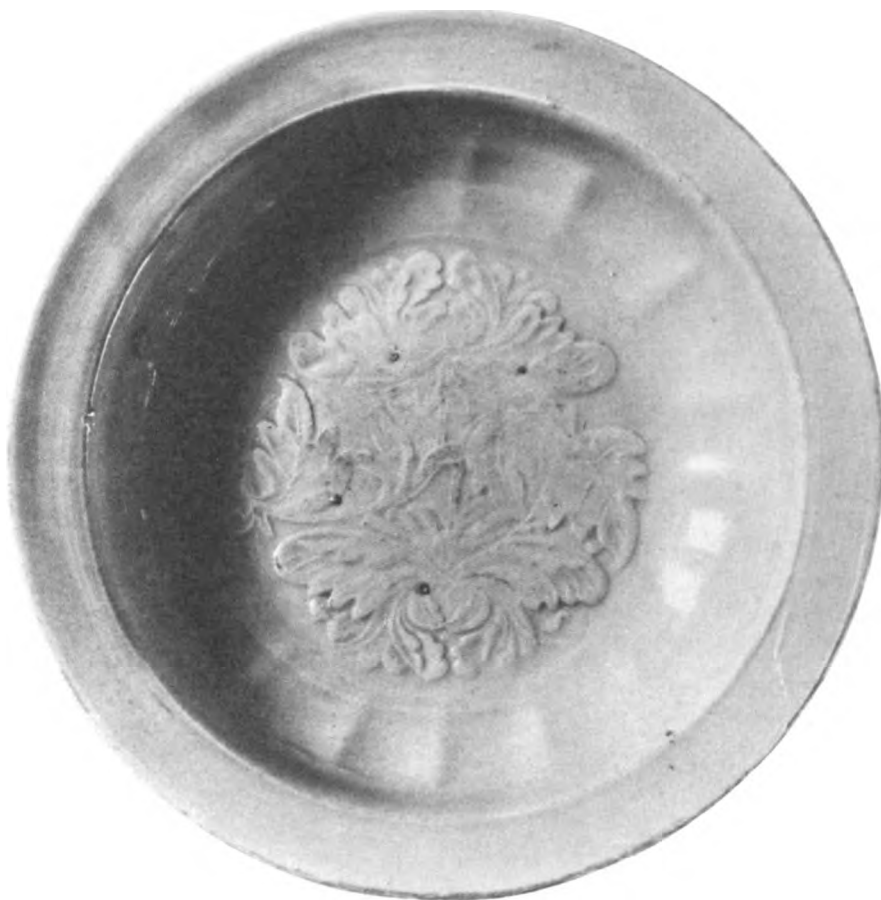


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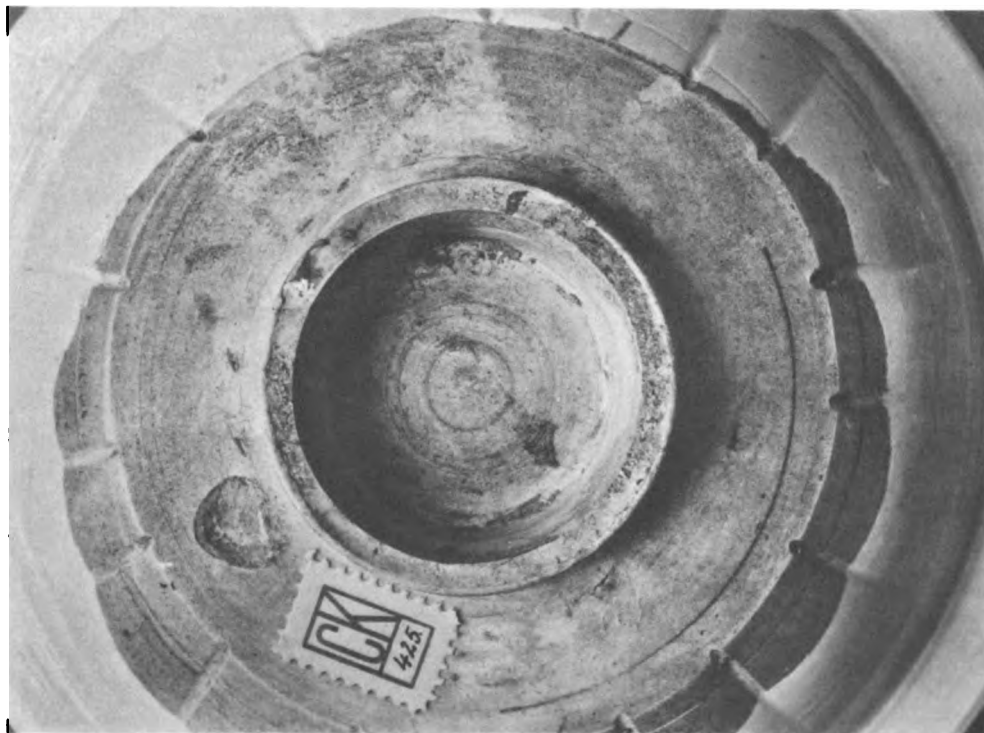


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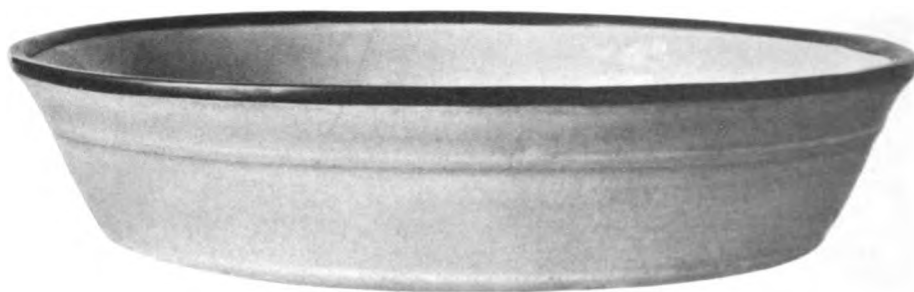
79

Pl. 92.





81



81



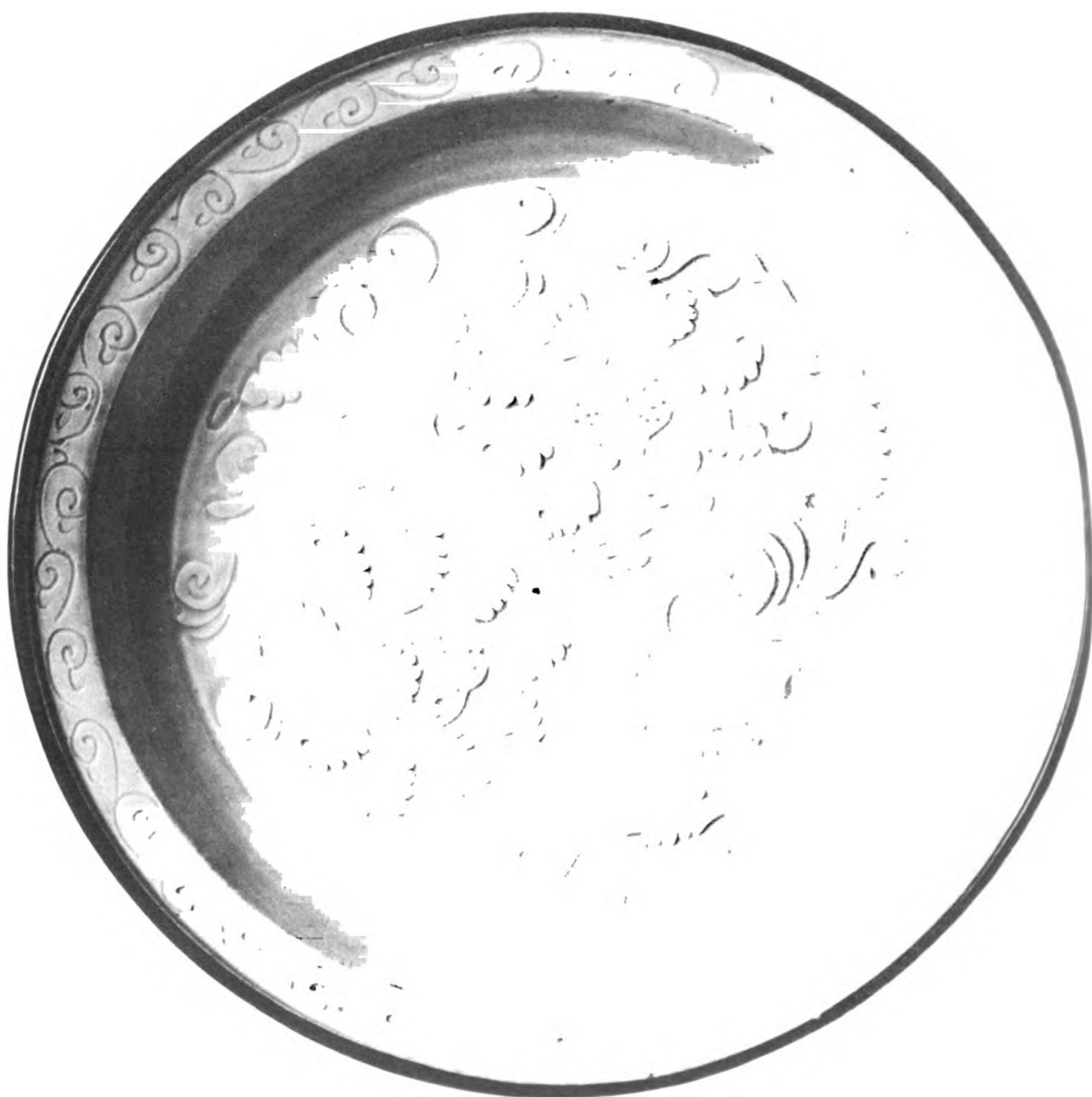
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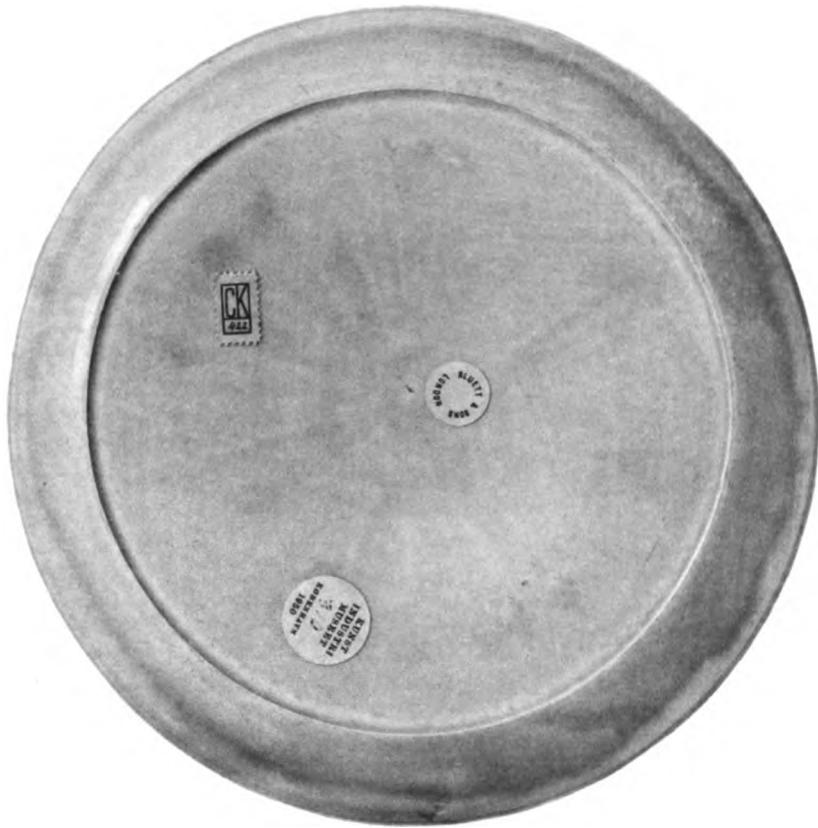


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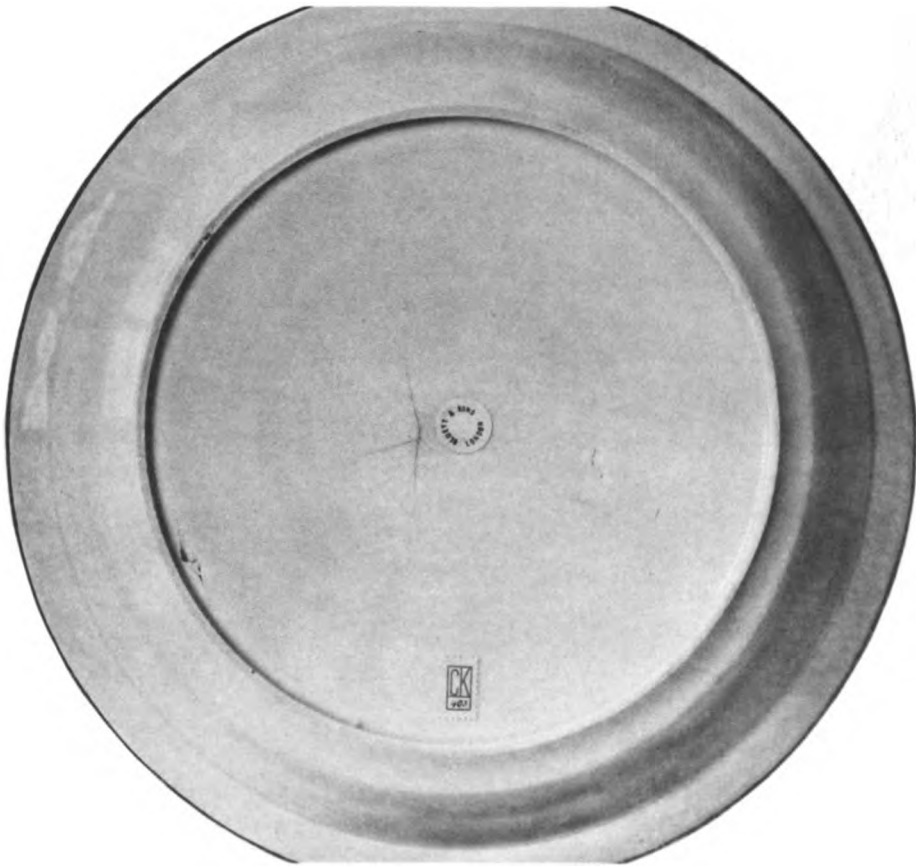


82





84



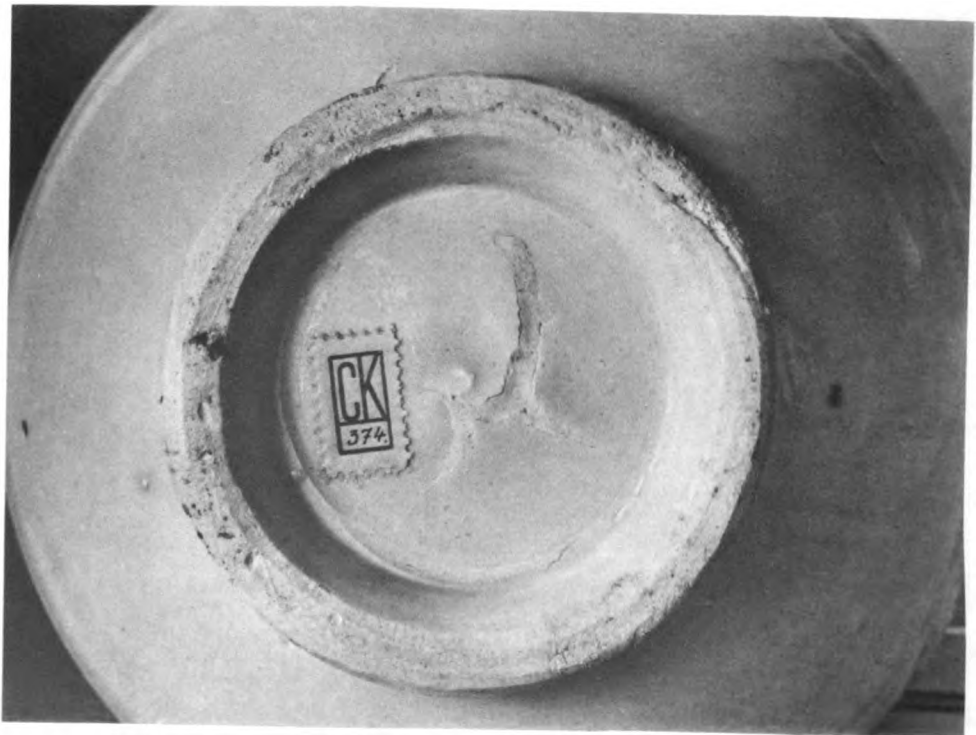
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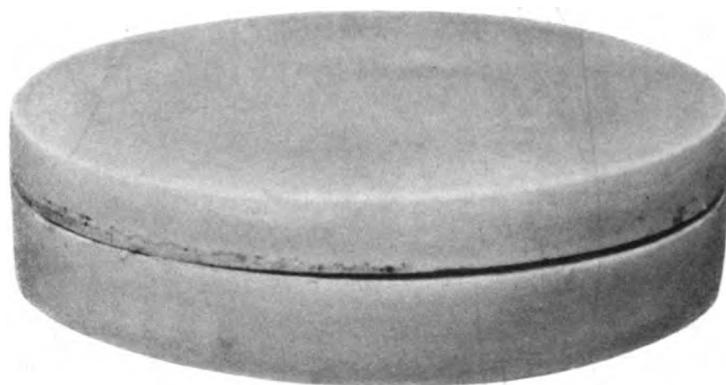


86









89



89 A



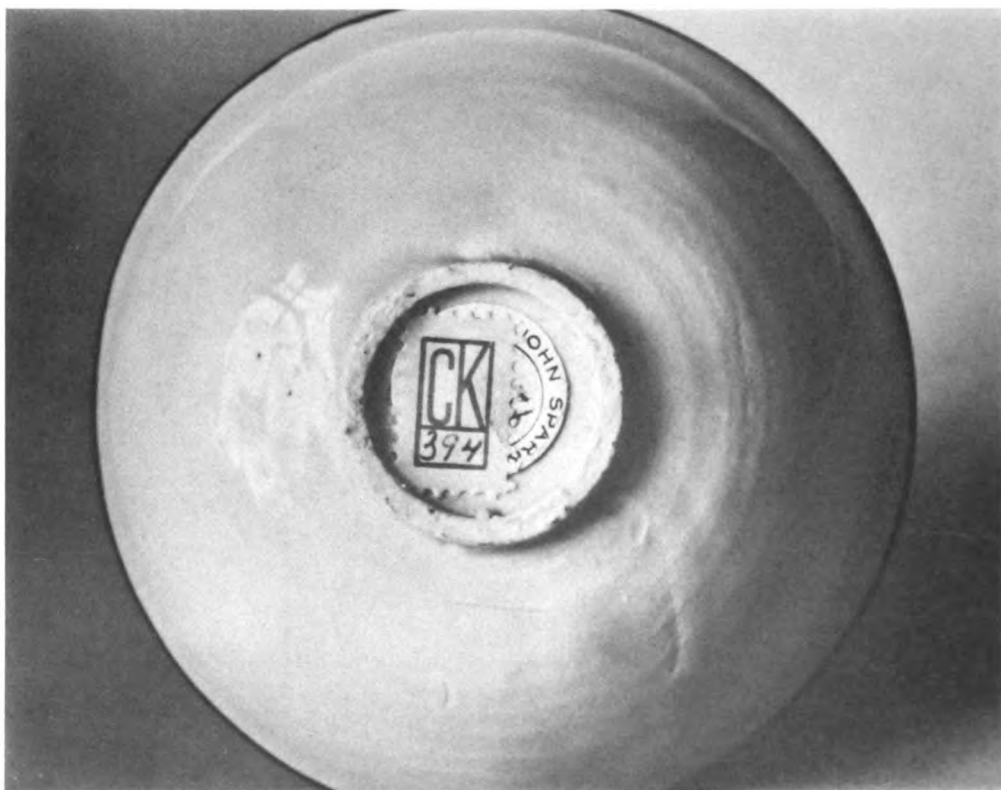
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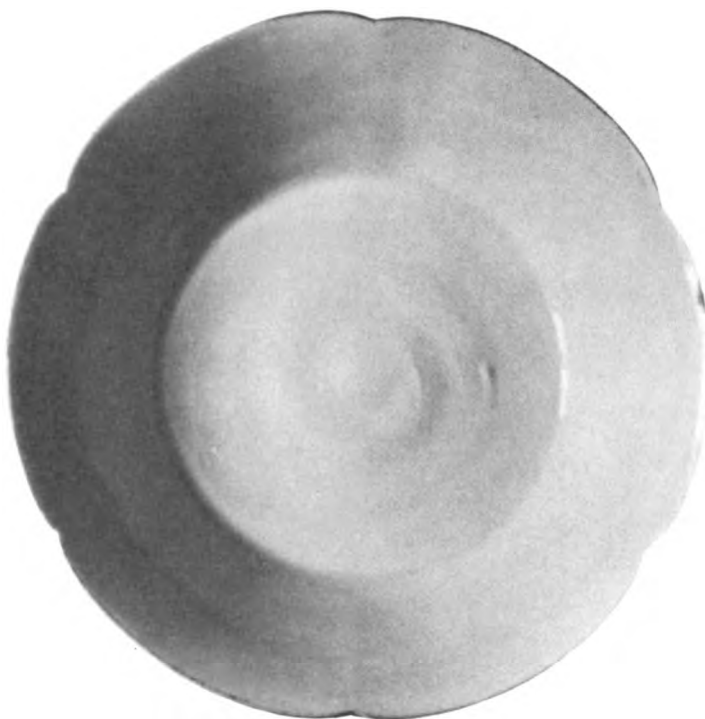
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91



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98



99

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